Example No.	Structure	APCI-MS
2162		520 (M + H)
2163	N CI N N CI N N N N N N N N N N N N N N	428 (M + H)
2164		462 (M + H)
2165		488 (M + H)
2166		475 (M + H)

Example No.	Structure	APCI-MS
2167		523 (M + H)
2168		451 (M + H)
2169	The state of the s	441 (M + H)
2170	N N N Br	458 (M + H)
2171	NH NH	474 (M + H)

Example No.	Structure	APCI-MS
2172		461 (M + H)
2173		470 (M + H)
2174		493 (M + H)
2175		483 (M + H)
2176		454 (M + H)

Example No.	Structure	APCI-MS
2177	HN O	490 (M + H)
2178	HN L HN L S	467 (M + H)
2179		566 (M + H)
2180		514 (M + H)
2181		568 (M + H)

Example No.	Structure	APCI-MS
2182		594 (M + H)
2183		442 (M + H)
2184	N H Br	552 (M + H)
2185		435 (M + H)
2186		450 (M + H)

Example No.	Structure	APCI-MS
2187	F F	448 (M + H)
2188	CI N N N CI	444 (M + H)
2189		478 (M + H)
2190		434 (M + H)
2191		446 (M + H)

Example No.	Structure	APCI-MS
2192		420 (M + H)
2193		440 (M + H)
2194		464 (M + H)
2195	F F F	448 (M + H)
2196		502 (M + H)

Example No.	Structure	APCI-MS
2197		462 (M + H)
2198		508 (M + H)
2199		440 (M + H)
2200	CI Br	488 (M + H)
2201		516 (M + H)

Example No.	Structure	APCI-MS
2202		404 (M + H)
2203	CI CI CI	478 (M + H)
2204		456 (M + H)
2205		464 (M + H)
2206		456 (M + H)

Example No.	Structure	APCI-MS
2207	C	450 (M + H)
2208	N CI	442 (M + H)
2209	N N N N N N N N N N N N N N N N N N N	408 (M + H)
2210	CI NAME OF CI	424 (M + H)
2211	CI CI	424 (M + H)

Example No.	Structure	APCI-MS
2212		448 (M + H)
2213	F F F	458 (M + H)
2214	F F F	458 (M + H)
2215		420 (M + H)
2216		419 (M + H)

Example No.	Structure	APCI-MS
2217		440 (M + H)
2218		446 (M + H)
2219		434 (M + H)
2220		446 (M + H)
2221		404 (M + H)

Example No.	Structure	APCI-MS
2222	N N N N N N N N N N N N N N N N N N N	408 (M + H)
2223		420 (M + H)
2224		420 (M + H)
2225		463 (M + H)
2226	F F	460 (M + H)

Example No.	Structure	APCI-MS
2227		462 (M + H)
2228		502 (M + H)
2229		434 (M + H)
2230		456 (M + H)
2231		432 (M + H)

Example No.	Structure	APCI-MS
2232		460 (M + H)
2233		488 (M + H)
2234		474 (M + H)
2235		446 (M + H)
2236	Br N	484 (M + H)

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Example No.	Structure	APCI-MS
2237		420 (M + H)
2238		568 (M + H)
2239		428 (M + H)
2240		396 (M + H)
2241		420 (M + H)

Example No.	Structure	APCI-MS
2242	Br N	468 (M + H)
2243		432 (M + H)
2244	Br N	468 (M + H)
2245		458 (M + H)
2246		423 (M + H)

Example No.	Structure	APCI-MS
2247		420 (M + H)
2248		404 (M + H)
2249		448 (M + H)
2250		446 (M + H)
2251		540 (M + H)

Example No.	Structure	APCI-MS
2252	CI N N N	470 (M + H)
2253		472 (M + H)
2254		479 (M + H)
2255		433 (M + H)
2256		458 (M + H)

Example No.	Structure	APCI-MS
2257		515 (M + H)
2258		410 (M + H)
2259		394 (M + H)
2260		368 (M + H)
2261		372 (M + H)

Example No.	Structure	APCI-MS
2262		397 (M + H)
2263		464 (M + H)
2264		462 (M + H)
2265		458 (M + H)
2266		492 (M + H)

Example No.	Structure	APCI-MS
2267		448 (M + H)
2268		460 (M + H)
2269		434 (M + H)
2270		454 (M + H)
2271		478 (M + H)

Example No.	Structure	APCI-MS
2272		462 (M + H)
2273		516 (M + H)
2274		476 (M + H)
2275		522 (M + H)
2276	CI CI	454 (M + H)

Example No.	Structure	APCI-MS
2277	N H CI	502 (M + H)
2278		530 (M + H)
2279		418 (M + H)
2280	N N CI CI CI	492 (M + H)
2281		470 (M + H)

Example No.	Structure	APCI-MS
2282		478 (M + H)
2283		470 (M + H)
2284	CI NO PLANTS OF THE PROPERTY O	464 (M + H)
2285	F CI	456 (M + H)
2286	N N N N N N N N N N N N N N N N N N N	422 (M + H)

Example No.	Structure	APCI-MS
2287	N N CI	438 (M + H)
2288		462 (M + H)
2289	N N F F	472 (M + H)
2290		472 (M + H)
2291		434 (M + H)

Example No.	Structure	APCI-MS
2292		433 (M + H)
2293	CI CI	454 (M + H)
2294		460 (M + H)
2295		448 (M + H)
2296		460 (M + H)

Example No.	Structure	APCI-MS
2297	N N N N N N N N N N N N N N N N N N N	422 (M + H)
2298		474 (M + H)
2299		476 (M + H)
2300		516 (M + H)
2301		448 (M + H)

Example No.	Structure	APCI-MS
2302	The property of the property o	470 (M + H)
2303		446 (M + H)
2304		488 (M + H)
2305		460 (M + H)
2306		434 (M + H)

Example No.	Structure	APCI-MS
2307		582 (M + H)
2308		442 (M + H)
2309		419 (M + H)
2310		434 (M + H)
2311	Br N	482 (M + H)

Example No.	Structure	APCI-MS
2312		418 (M + H)
2313		446 (M + H)
2314		482 (M + H)
2315		472 (M + H)
2316		437 (M + H)

Example No.	Structure	APCI-MS
2317		434 (M + H)
2318		418 (M + H)
2319		462 (M + H)
2320		460 (M + H)
2321		554 (M + H)

Example No.	Structure	APCI-MS
2322		470 (M + H)
2323		537 (M + H)
2324		529 (M + H)
2325		424 (M + H)
2326		408 (M + H)

Example No.	Structure	APCI-MS
2327	The state of the s	382 (M + H)
2328	CTNT PTC°	386 (M + H)

Example 2329

trans-4-Bromo-N-{4-[(4-methylamino-quinazolin-2-ylamino)-methyl]-cyclohexylmethyl}-2-trifluoromethoxy-benzenesulfonamide hydrochloride

Step A: Synthesis of *trans-4-*[(4-bromo-2-trifluoromethoxy-benzenesulfonylamino)-methyl]-cyclohexanecarboxylic acid.

To a solution of *trans*-4-aminomethyl-cyclohexanecarboxylic acid (3.14 g, 20 mmol) in THF (20 mL) and 1 M aqueous sodium hydroxide (42 mL) was added a solution of 4-bromo-2-trifluoromethoxy benzenesulfonyl chloride (6.9 g, 20.4 mmol) in THF (20 mL) and the mixture was stirred for 2 hr at ambient temperature. The resulting mixture was concentrated and 1 M aqueous HCl (45 mL) was added. The resulting precipitate was filtered, washed with water and hexanes to give *trans*-4-[(4-bromo-2-trifluoromethoxy-benzenesulfonylamino)-methyl]-cyclohexanecarboxylic acid (7.18 g, 78%) as a white powder.

ESI MS m/e 460/462 M + H⁺; ¹H NMR $(500 \text{ MHz}, \text{ DMSO-d}_6)$ δ 12.00 (brs, 1 H), 7.99 (brs, 1 H), 7.84-7.80 (m, 3 H), 2.72 (d, <math>J = 6.3 Hz, 2 H), 2.10 (m, 1 H), 1.86 (m, 2 H), 1.71 (m, 2 H), 1.31 (m, 1 H), 1.23 (m, 2 H), 0.87 (m, 2 H).

Step B: Synthesis of *trans-4-*[(4-bromo-2-trifluoromethoxy-benzenesulfonylamino)-methyl]-cyclohexanecarboxylic acid amide.

A solution of *trans*-4-[(4-bromo-2-trifluoromethoxy-benzenesulfonylamino)-methyl]-cyclohexanecarboxylic acid (7.14 g, 15.5 mmol) and triethylamine (2.35 mL, 16.9 mmol) in THF (25 mL) was cooled to 0 °C. To the mixture was added ethyl chloroformate (1.62 mL, 17 mmol) in THF (5 mL) over 10 min. After stirring at 0 °C for 15 min, aqueous ammonia (27 mL) was added dropwise and the mixture was stirred at ambient temperature for 2 hr. The mixture was concentrated under reduced pressure and the concentrate was treated with water to give a solid. The solid was filtered and washed with water and hexanes to give *trans*-4-[(4-bromo-2-trifluoromethoxy-

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benzenesulfonylamino)-methyl]-cyclohexanecarboxylic acid amide as a white solid (4.2 g, 59%).

ESI MS m/e 459/461 M + H⁺; ¹H NMR (500 MHz, DMSO-d₆) δ 7.98 (brs, 1 H), 7.84-7.80 (m, 3 H), 7.13 (s, 1 H), 6.62 (s, 1 H), 2.72 (d, J = 6.5 Hz, 2 H), 1.98 (m, 1 H), 1.70 (m, 4 H), 1.29 (m, 1 H), 1.23 (m, 2 H), 0.83 (m, 2 H).

Step C: Synthesis of *trans-N*-(4-aminomethyl-cyclohexylmethyl)-4-bromo-2-trifluoromethoxy-benzenesulfonamide.

To a solution of *trans*-4-[(4-bromo-2-trifluoromethoxy-benzenesulfonylamino)-methyl]-cyclohexanecarboxylic acid amide (4.2 g, 9.2 mmol) in THF (40 mL) was added a solution of 1 M BH₃ in THF (32 mL, 32 mmol) over 40 min. The mixture was refluxed for 2 hr. After cooling to 0 °C, the mixture was quenched with water (7 mL). To the resulting mixture were added 4 M HCl in EtOAc (28 mL) and MeOH (28 mL) and the mixture was concentrated. To the residue was added MeOH (28 mL) and the mixture was once again concentrated. The resulting HCl-salt was recrystallized from Et₂O and subsequently neutralized with 1 M aqueous sodium hydroxide. The aqueous layer was extracted with CH₂Cl₂ (twice), the organic layers combined, dried over sodium sulfate, and concentrated under reduced pressure to give *trans-N*-(4-aminomethyl-cyclohexylmethyl)-4-bromo-2-trifluoromethoxy-benzenesulfonamide as a white solid (3.0 g, 74%).

ESI MS m/e 445/447 M + H⁺; ¹H NMR (500 MHz, DMSO-d₆) δ 7.84-7.79 (m, 3 H), 3.42 (brs, 2 H), 2.72 (d, J = 6.8 Hz, 2 H), 2.33 (d, J = 6.5 Hz, 2 H), 1.73 (m, 4 H), 1.27 (m, 1 H), 1.09 (m, 1 H), 0.80 (m, 4 H).

Step D: Synthesis of trans-4-Bromo-N-{4-[(4-methylamino-quinazolin-2-ylamino)-methyl]-cyclohexylmethyl}-2-trifluoromethoxy-benzenesulfonamide hydrochloride.

A mixture of (2-chloro-quinazolin-4-yl)-methylamine obtained in step A of example 50 (58 mg, 0.3 mmol) and trans-N-(4-aminomethyl-cyclohexylmethyl)-4-bromo-2-trifluoromethoxy-benzenesulfonamide amide (133 mg, 0.3 mmol) in 2-propanol (0.5 mL) was stirred at reflux for 24 hr. The mixture was cooled and the resulting white solid was collected by filtration and washed with 2-propanol to give trans-4-Bromo-N-{4-[(4-methylamino-quinazolin-2-ylamino)-methyl]-cyclohexylmethyl}-2-trifluoromethoxy-benzenesulfonamide hydrochloride as a white solid (121 mg, 67%).

ESI MS m/e 602/604 M + H $^{+}$; ¹H NMR (500 MHz, DMSO-d₆) δ 12.61 (brs, 1 H), 9.70

(brs, 1 H), 8.26 (d, J = 8.1 Hz, 1 H), 8.15 (brs, 1 H), 8.02 (t, J = 5.7 Hz, 1 H), 7.84-7.74 (m, 4 H), 7.41 (m, 1 H), 3.32 (m, 2 H), 3.07 (d, J = 3.5 Hz, 3 H), 2.73 (t, J = 6.2 Hz, 2 H), 1.77 (m, 4 H), 1.53 (m, 1 H), 1.32 (m, 1 H), 0.96 (m, 2 H), 0.82 (m, 2 H).

Example 2330

trans-N-{4-[(4-Dimethylamino-quinazolin-2-ylamino)-methyl]-cyclohexylmethyl}-2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonamide hydrochloride

Step A: Synthesis of *trans*-4-{[2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonylamino]-methyl}-cyclohexanecarboxylic acid.

To a solution of *trans*-4-aminomethyl-cyclohexanecarboxylic acid (1.5 g, 10 mmol) in THF (10 mL) and 1 M aqueous sodium hydroxide (27 mL) was added a solution of 2,5-bis(2,2,2-trifluoroethoxy) benzenesulfonyl chloride (3.8 g, 10.25 mmol) in THF (10 mL) dropwise and the mixture was stirred at ambient temperature for 2 hr. The resulting mixture was concentrated and 1 M aqueous HCl (22.5 mL) was added. The resulting precipitate was filtered, washed with water and hexanes to give *trans*-4-{[2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonylamino]-methyl}-cyclohexanecarboxylic acid as a white powder (2.8 g, 57%).

ESI MS m/e 494 M + H⁺; ¹H NMR (500 MHz, DMSO-d₆) δ 7.36 (m, 3 H), 7.23 (brs, 1 H), 4.88 (m, 4 H), 2.73 (m, 2 H), 2.10 (m, 1 H), 1.87 (m, 2 H), 1.72 (m, 2 H), 1.30 (m, 1 H), 1.23 (m, 2 H), 0.87 (m, 2 H).

Step B: Synthesis of *trans*-4-{[2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonylamino]-methyl}-cyclohexanecarboxylic acid amide.

A solution of *trans*-4-{[2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonylamino]-methyl}-cyclohexanecarboxylic acid (2.78 g, 5.63 mmol) and triethylamine (1.9 mL,

13.6 mmol) in THF (25 mL) was cooled to 0 °C. To the mixture was added ethyl chloroformate (0.586 mL, 6.2 mmol) in THF (5 mL) over 10 min. After stirring at 0 °C for 15 min, 25% aqueous ammonia (10 mL) was added dropwise. The mixture was stirred at ambient temperature for 2 hr. The resulting mixture was concentrated under reduced pressure and the concentrate was diluted with water to give a solid. The solid was filtered and washed with water and hexanes to give trans-4-{[2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonylamino]-methyl}-cyclohexanecarboxylic acid amide as a white solid (2.7 g, 98%).

ESI MS m/e 493 M + H⁺; ¹H NMR (500 MHz, DMSO-d₆) δ 7.36 (m, 3 H), 7.23 (t, J = 6.1 Hz, 1 H), 7.13 (s, 1 H), 6.62 (s, 1 H), 4.88 (m, 4 H), 2.74 (t, J = 6.4 Hz, 2 H), 1.99 (m, 1 H), 1.75 (m, 4 H), 1.28 (m, 1 H), 1.23 (m, 2 H), 0.83 (m, 2 H).

Step C: Synthesis of trans-N-(4-aminomethyl-cyclohexylmethyl)-2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonamide.

To a solution of *trans*-4-{[2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonylamino]-methyl}-cyclohexanecarboxylic acid amide (2.7 g, 5.5 mmol) in THF (20 mL) was added a solution of 1 M BH₃ in THF (20 mL, 20 mmol) over 40 min. The mixture was stirred at reflux for 2 hr. After cooling to 0 °C, the mixture was quenched with water (7 mL). To the mixture were added 4 M HCl in EtOAc (28 mL) and MeOH (50 mL) and the mixture was concentrated. To the residue was added MeOH (50 mL) and the mixture was once again concentrated. The resulting HCl-salt was recrystallized from Et₂O and subsequently neutralized with 1 M aqueous sodium hydroxide. The aqueous layer was extracted with CH₂Cl₂ (twice), the combined organic layers were dried over sodium sulfate, and concentrated under reduced pressure to give *trans-N*-(4-aminomethyl-cyclohexylmethyl)-2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonamide as a white solid (1.5 g, 57%).

ESI MS m/e 479 M + H⁺; ¹H NMR (500 MHz, DMSO-d₆) δ 7.36-7.32 (m, 3 H), 6.62 (brs, 1 H), 4.88-4.78 (m, 4 H), 3.42 (b, 2 H), 2.73 (d, J = 6.6 Hz, 2 H), 2.34 (d, J = 6.3 Hz, 2 H), 1.73 (m, 4 H), 1.27 (m, 1 H), 1.10 (m, 1 H), 0.77 (m, 4 H).

Step D: Synthesis of *trans-N-*{4-[(4-Dimethylamino-quinazolin-2-ylamino)-methyl]-cyclohexylmethyl}-2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonamide hydrochloride.

A mixture of (2-chloro-quinazoline-4-yl)-dimethyl-amine obtained in step B of example 1 (41.4 mg, 0.2 mmol) and trans-N-(4-aminomethyl-cyclohexylmethyl)-2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonamide (95.6 mg, 0.2 mmol) in 2-propanol was stirred at reflux for 24 hr. The reaction mixture was concentrated and the residue was purified by column chromatography (silica gel) to give the product as a white foam. The product was dissolved in CH₂Cl₂ and treated with 1 M HCl in Et₂O. The mixture was concentrated to give trans-N-{4-[(4-Dimethylamino-quinazolin-2-ylamino)-methyl]-cyclohexylmethyl}-2,5-bis-(2,2,2-trifluoro-ethoxy)-benzenesulfonamide hydrochloride as a white foam (101 mg, 78%).

ESI MS m/e 650 M + H⁺; ¹H NMR (500 MHz, DMSO-d₆) δ 8.16 (d, J = 8.2 Hz, 1 H), 8.00 (brs, 1 H), 7.78 (t, J = 7.9, 1 H), 7.44 (brs, 1 H), 7.34 (m, 4 H), 7.24 (t, J = 5.9 Hz, 1 H), 4.88 (m, 4 H), 3.32 (s, 6 H), 3.29 (m, 2 H), 2.75 (t, J = 6.2 Hz, 2 H), 1.74 (m, 4 H), 1.52 (m, 1 H), 1.32 (m, 1 H), 0.94 (m, 2 H), 0.83 (m, 2 H).

Example 2331

trans-4-Bromo-N-(4-guanidinomethyl-cyclohexylmethyl)-2-trifluoromethoxy-benzenesulfonamide dihydrochloride

Step A: Synthesis of *trans*-[({4-[(4-bromo-2-trifluoromethoxy-benzenesulfonylamino)-methyl]-cyclohexylmethyl}-amino)-*tert*-butoxycarbonylamino-methyl]-carbamic acid *tert*-butyl ester.

To a solution of trans-N-(4-aminomethyl-cyclohexylmethyl)-4-bromo-2-trifluoromethoxy-benzenesulfonamide obtain in step C of example 2329 (45 mg, 0.1 mmol) and triethylamine (14 μ L, 0.1 mmol) in CH₂Cl₂ (5 mL) was added (tert-butoxycarbonylamino-trifluoromethanesulfonylimino-methyl)-carbamic acid tert-butyl ester (39.1 mg, 0.1 mmol). The reaction mixture was stirred at ambient temperature for 2 hr and concentrated. The residue was purified by column chromatography (silica gel,

CH₂Cl₂ to 10% MeOH in CH₂Cl₂) to give trans-[({4-[(4-bromo-2-trifluoromethoxy-benzenesulfonylamino)-methyl]-

cyclohexylmethyl}-amino)-tert-butoxycarbonylamino-methyl]-carbamic acid tert-butyl ester as a white solid (63 mg, 92%).

ESI MS m/e 687/689 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 11.45 (s, 1 H), 8.22 (t, J = 5.6 Hz, 1 H), 7.97 (t, J = 5.6 Hz, 1 H), 7.99-7.79 (m, 3 H), 3.13 (t, J = 6.4 Hz, 2 H), 2.72 (t, J = 6 Hz, 2 H), 1.70 (m, 4 H), 1.46 (s, 9 H), 1.38 (s, 9 H), 1.31 (m, 2 H), 0.83 (m, 4 H).

Step B: Synthesis of *trans-*4-bromo-*N*-(4-guanidinomethyl-cyclohexylmethyl)-2-trifluoromethoxy-benzenesulfonamide dihydrochloride.

A solution of *trans*-[({4-[(4-bromo-2-trifluoromethoxy-benzenesulfonylamino)-methyl]-cyclohexylmethyl}-amino)-*tert*-butoxycarbonylamino-methyl]-carbamic acid *tert*-butyl ester (53 mg, 0.077 mmol) in 50% TFA in CH₂Cl₂ (2 mL) was stirred at ambient temperature for 3 hr and the reaction mixture was concentrated. To the residue was added a solution of 1 M HCl in Et₂O (0.5 mL) and the mixture was concentrated to give *trans*-4-Bromo-N-(4-guanidinomethyl-cyclohexylmethyl)-2-trifluoromethoxy-

benzenesulfonamide dihydrochloride as a white solid (29 mg, 68%).

ESI MS m/e 487/489 M + H⁺; ¹H NMR (500 MHz, DMSO-d₆) δ 8.01 (t, J = 5.5 Hz, 1 H), 7.84 (m, 3 H), 7.68 (m, 1 H), 7.30 (m, 2 H), 6.85 (m, 2 H), 2.94 (t, J = 6.1 Hz, 2 H), 2.74 (t, J = 6.1 Hz, 2 H), 1.71 (m, 2 H), 1.31 (m, 4 H), 0.86 (m, 4 H).

Example 2332

 $cis-N^4,N^4$ -Dimethyl- N^2 -{4-[(2-trifluoromethyl-benzylamino)-methyl]-cyclohexyl}-quinazoline-2,4-diamine ditrifluoro-acetic acid

Step A: Synthesis of cis-4-tert-butoxycarbonylamino-cyclohexanecarboxylic acid.

To a solution of cis-4-amino-cyclohexanecarboxylic acid (50 g, 350 mmol) in THF

(200 mL) and 1 M aqueous sodium hydroxide (380 mL, 380 mmol) was added (Boc)₂O (83.5 g, 360 mmol). The reaction mixture was stirred at ambient temperature for 2 hr and concentrated. The residue was cooled to 0 °C followed by acidification with 1 M HCl (pH = 3). The resulting white solid was filtered, washed with water and hexanes to give *cis-4-tert*-butoxycarbonylamino-cyclohexanecarboxylic acid (71g, 83%) as a white solid. ESI MS m/e 244 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 12.00 (brs, 1 H), 6.74 (d, J = 4.25, 1 H), 3.30 (brs, 1 H), 2.35 (m, 1 H), 1.87 (m, 2 H), 1.55-1.37 (m, 15 H).

Step B: Synthesis of cis-(4-carbamoyl-cyclohexyl)-carbamic acid tert-butyl ester.

To solution cooled at 0°C of cis-4-tert-butoxycarbonylaminocyclohexanecarboxylic acid (68.0 g, 280 mmol) and triethylamine (31.1 g, 307 mmol) in THF (300 mL) was added ethyl chloroformate (29.3 mL, 308 mmol) dropwise. stirring at 0 °C for 30 min, 25% aqueous ammonia (168 mL) was added dropwise. The reaction mixture was stirred at ambient temperature for 2 hr and concentrated. The residue was extracted with EtOAc (three times). The combined organic layer was washed with saturated aqueous NaHCO₃, 1 M HCl, brine, and water, dried over Na₂SO₄, filtered, and concentrated to give cis-(4-carbamoyl-cyclohexyl)-carbamic acid tert-butyl ester (62.0 g, 88%) as a white solid.

ESI MS m/e 243 M + H $^+$; 1 H NMR (400 MHz, DMSO-d $_6$) δ 7.10 (brs, 1 H), 6.69 (b, 2 H), 3.41 (brs, 1 H), 2.14 (m, 1 H), 1.79 (m, 2 H), 1.59 (m, 2 H), 1.45-1.37 (m, 13 H).

Step C: Synthesis of cis-4-amino-cyclohexanecarboxylic acid amide hydrochloride.

To a solution of cis-(4-carbamoyl-cyclohexyl)-carbamic acid tert-butyl ester (62 g, 256 mmol) in CH_2Cl_2 (250 mL) was added TFA (250 mL) and the mixture was stirred at ambient temperature for 1 hr. The mixture was concentrated and 2 M HCl in Et_2O (150 mL) was added to give a white precipitate. The mixture was concentrated to give cis-4-amino-cyclohexanecarboxylic acid amide hydrochloride (45 g, 98%) as a white solid. ESI MS m/e 143 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 8.08 (m, 3 H), 7.28 (s, 1 H), 6.78 (s, 1 H), 3.10 (m, 1 H), 2.24 (m, 1 H), 1.90 (m, 2 H), 1.66 (m, 4 H), 1.50 (m, 2 H).

Step D: Synthesis of cis-4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexanecarboxylic acid amide.

A solution of (2-chloro-quinazolin-4-yl)-dimethyl-amine obtained in step B of

example 1 (31.05 g, 150 mmol) and *cis*-4-amino-cyclohexanecarboxylic acid amide hydrochloride (26.7 g, 150 mmol) in pyridine (150 mL) was stirred at reflux for overnight. The reaction mixture was concentrated and residue was dissolve in CH₂Cl₂. The organic layer was washed with saturated aqueous NaHCO₃ and the aqueous layer was extracted with CH₂Cl₂. The organic layer was dried over Na₂SO₄, filtered and concentrated. The residue was purified by column chromatography (silica gel, 2% to 10% 2 M NH₃/MeOH in CH₂Cl₂) to give a slightly brown solid and the solid was recrystallized from CH₂Cl₂ to give *cis*-4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexanecarboxylic acid amide (20.6 g, 44%) as yellow crystals.

ESI MS m/e 314 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 8.19 (brs, 1 H), 8.15 (d, J = 8.4 Hz, 1 H), 7.77 (t, J = 8.0 Hz, 1 H), 7.42 (d, J = 7.2 Hz, 1 H), 7.35 (t, J = 8.4 Hz, 1 H), 7.21 (s, 1 H), 6.74 (s, 1 H), 4.12 (m, 1 H), 3.46 (m, 6 H), 2.24 (m, 1 H), 1.79-1.61 (m, 8 H).

Step E: Synthesis of $cis-N^2$ -(4-aminomethyl-cyclohexyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine.

To a solution of *cis*-4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexanecarboxylic acid amide (18.78 g, 60 mmol) in THF (200 mL) was added a solution of 1 M BH₃ in THF (300 mL, 300 mmol). The mixture was stirred at reflux for 2 hr. After cooling the reaction mixture to 0 °C, 4 M HCl in EtOAc (100 mL) and MeOH (200 mL) were added. The mixture was concentrated. The mixture was treated with 1 M aqueous sodium hydroxide and the aqueous layer was extracted with CH₂Cl₂. The organic layer was dried over sodium sulfate, concentrated, and purified by column chromatography (silica gel, 10% 2 M NH₃/MeOH in CH₂Cl₂) to give *cis-N*²-(4-aminomethyl-cyclohexyl)-*N*⁴,*N*⁴-dimethyl-quinazoline-2,4-diamine as a white solid (10.6 g, 59%).

ESI MS m/e 300 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.84 (d, J = 8.4 Hz, 1 H), 7.46 (t, J = 6.8 Hz, 1 H), 7.26 (d, J = 8.4 Hz, 1 H), 6.99 (t, J = 6.8 Hz, 1 H), 6.28 (brs, 1 H), 4.02 (m, 1 H), 3.19 (m, 6 H), 2.47 (d, J = 6.8 Hz, 2 H), 2.73 (m 2 H), 1.68-1.33 (m, 9 H).

Step F: Synthesis of $cis-N^4$, N^4 -dimethyl- N^2 -{4-[(2-trifluoromethyl-benzylamino)-methyl]-cyclohexyl}-quinazoline-2,4-diamine ditrifluoro-acetic acid.

A solution of cis-N²-(4-aminomethyl-cyclohexyl)-N⁴,N⁴-dimethyl-quinazoline-2,4-diamine (33 mg, 0.11 mmol) and 2-trifluoromethyl benzaldehyde (17.41 mg, 0.1 mmol) in MeOH (1 mL) was stirred at ambient temperature for 3 hr. To the mixture was added NaBH(OAc)₃ (85 mg, 0.4 mmol) and the mixture was stirred at ambient temperature for overnight. This resulting mixture was quenched with 50% DMSO in water (2 mL) and the solution was purified by preparative HPLC. The pure fractions were combined and lyophilized to give cis-N⁴,N⁴-dimethyl-N²-{4-[(2-trifluoromethyl-benzylamino)-methyl]-cyclohexyl}-quinazoline-2,4-diamine ditrifluoro-acetic acid (41.4 mg, 60%) as a white solid.

ESI MS m/e 458 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 13.12 (brs, 1 H), 8.94 (b, 2 H), 8.65 (d, J = 6.8 Hz, 1 H), 8.16 (d, J = 8.8 Hz, 1 H), 7.77-7.66 (m, 5 H), 7.41 (d, J = 8.4 Hz, 1 H), 7.35 (t, J = 8 Hz, 1 H), 4.22 (s, 2 H), 4.17 (m, 1 H), 3.46 (b, 6 H), 2.94 (m, 2 H), 1.87-1.44 (m, 9 H).

Example 2333

cis-5-(4-Chloro-phenyl)-2-trifluoromethyl-furan-3-carboxylic acid [4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexylmethyl]-amide trifluoro-acetic acid

Step A: Synthesis of *cis*-5-(4-chloro-phenyl)-2-trifluoromethyl-furan-3-carboxylic acid [4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexylmethyl]-amide trifluoroacetic acid.

A solution of cis- N^2 -(4-aminomethyl-cyclohexyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine obtained in step E of example 2332 (30 mg, 0.1 mmol), 5-(4-chloro-phenyl)-2-trifluoromethyl-furan-3-acid chloride (37 mg, 0.12 mmol), and pyridine (12 μ L, 0.15 mmol) in DMF (0.5 mL) was stirred at ambient temperature for overnight. The resulting mixture was diluted with DMSO (0.8 mL) and the mixture was purified by preparative

HPLC. The pure fractions were combined and lyophilized to give cis-5-(4-chlorophenyl)-2-trifluoromethyl-furan-3-carboxylic acid [4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexylmethyl]-amide trifluoro-acetic acid (17.5 mg, 26%) as a white solid. ESI MS m/e 572 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 12.30 (brs, 1 H), 8.65 (t, J = 6.8 Hz, 1 H), 8.19 (brs, 1 H), 8.14 (d, J = 8.0 Hz, 1 H), 7.83-7.30 (m, 8 H), 4.1 (m, 1 H), 3.46 (b, 6 H), 3.09 (m, 2 H), 1.77-1.38 (m, 9 H).

Example 2334

cis-N-[4-(4-Dimethylamino-quinazolin-2-ylamino)-cyclohexylmethyl]-3,4,5-trimethoxy-benzamide trifluoro-acetic acid

Step A: Synthesis of cis-N-[4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexylmethyl]-3,4,5-trimethoxy-benzamide trifluoro-acetic acid.

To HOBt-6-carboxaamidomethyl polystyrene 200-400 mesh (77 mg, 0.1 mmol) were added a solution of 0.3 M PyBroP in DMF (1 mL, 0.3 mmol), 3,4,5-trimethoxybenzoic acid (63 mg, 0.3 mmol), and diisopropylethylamine (85 μL, 0.5 mmol). The mixture was stirred at ambient temperature for 5 hr. The resin was washed with DMF (3 times), CH₂Cl₂ (3 times), MeOH (3 times), CH₂Cl₂ (2 times), and DMF (2 times). To the resin was added *cis-N*²-(4-aminomethyl-cyclohexyl)-*N*⁴,*N*⁴-dimethyl-quinazoline-2,4-diamine obtained in step E of example 2332 (28 mg, 0.09 mmol) in DMF (0.5 mL) and the mixture was stirred at ambient temperature for overnight. The resin was filtered and washed with 0.5 mL DMSO (2 times). The combined filtrates were purified by preparative HPLC. The pure fractions were combined and lyophilized to give *cis N*-[4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexylmethyl]-3,4,5-trimethoxy-benzamide trifluoro-acetic acid (7.4 mg, 12%) as a white solid.

ESI MS m/e 494 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 12.25 (brs, 1 H), 8.45 (t, J = 5.6 Hz, 1 H), 8.17 (brs, 1 H), 8.14 (d, J = 8.0 Hz, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.42 (d, J = 8.0 Hz, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.42 (d, J = 8.0 Hz, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.42 (d, J = 8.0 Hz, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.42 (d, J = 8.0 Hz, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.42 (d, J = 8.0 Hz, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.42 (d, J = 8.0 Hz, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.42 (d, J = 8.0 Hz, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.42 (d, J = 8.0 Hz, 1 H), J = 8.0 Hz, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.42 (d, J = 8.0 Hz, 1 H), J = 8.0 Hz, J = 8.

= 7.2 Hz, 1 H), 7.34 (t, J = 7.6 Hz, 1 H), 7.15 (s, 2 H), 4.13 (m, 1 H), 3.44 (s, 3 H), 3.39 (s, 3 H), 3.20 (m, 2 H), 1.77-1.37 (m, 9 H).

Example 2335

Biphenyl-4-carboxylic acid {4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-phenyl}-amide

Step A: Synthesis of (4-amino-benzyl)-carbamic acid tert-butyl ester.

A solution of 4-aminomethyl-phenylamine (12.2 g, 100 mmol) and (Boc)₂O (21.8 g, 100 mmol) in CH₂Cl₂ (100 mL) was stirred at ambient temperature for overnight. The mixture was concentrated and the residue was purified by column chromatography (silica gel, CH₂Cl₂ to 10% MeOH in CH₂Cl₂) to give (4-amino-benzyl)-carbamic acid *tert*-butyl ester (11.6 g, 52%) as a slightly yellow solid.

ESI MS m/e 223 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.27 (t, J = 6.0 Hz, 1 H), 6.86 (d, J = 8.0 Hz, 2 H), 6.47 (d, J = 6.4 Hz, 2 H), 4.89 (s, 2 H), 3.91 (d, J = 6.0 Hz, 2 H), 1.39 (s, 9 H).

Step B: Synthesis of biphenyl-4-carboxylic acid (4-aminomethyl-phenyl)-amide hydrochloride.

To a solution of (4-amino-benzyl)-carbamic acid *tert*-butyl ester (1.11 g, 5 mmol), biphenyl carboxylic acid (0.99 g, 5 mmol), EDC (1.2 g, 6.25 mmol), and HOAt (0.82 g, 6 mmol) in CH₂Cl₂ (10 mL) was added triethylamine (pH = 10) and the mixture was stirred at ambient temperature for overnight. The organic layer was washed with saturated aqueous NaHCO₃, 1 M aqueous HCl, water, dried over Na₂SO₄, filtered, and concentrated. The residue was dissolved in 50% TFA in CH₂Cl₂ (10 mL) and the mixture was stirred at ambient temperature. After 30 minutes, the mixture was concentrated and diluted with 1 M HCl in Et₂O (5 mL). The mixture was concentrated to give biphenyl-4-carboxylic acid (4-aminomethyl-phenyl)-amide hydrochloride (828 mg, 49%).

ESI MS m/e 303 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 10.40 (s, 1 H), 8.34 (b, 3 H), 8.07 (d, J = 8.0 Hz, 2 H), 7.83-7.73 (m, 6 H), 7.51-7.38 (m, 5 H), 4.0 (q, J = 5.6 Hz, 2 H).

Step C: Synthesis of biphenyl-4-carboxylic acid {4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-phenyl}-amide.

A mixture of (2-chloro-quinazolin-4-yl)-dimethyl-amine obtained in step B of example 1 (42 mg, 0.2 mmol) and biphenyl-4-carboxylic acid (4-aminomethyl-phenyl)-amide hydrochloride (49 mg, 0.14 mmol) in 2-propanol (1 mL) and triethylamine (200 μL) was stirred at reflux for 2 days. The resulting mixture was concentrated and purified by column chromatography (silica gel, CH₂Cl₂ to 10% 2 M NH₃/MeOH in CH₂Cl₂) to give biphenyl-4-carboxylic acid {4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-phenyl}-amide (10 mg, 15%) as a white solid.

ESI MS m/e 474 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 10.19 (s, 1 H), 8.02 (d, J = 7.2 Hz, 2 H), 7.86 (d, J = 8.4 Hz, 1 H), 7.80 (d, J = 8.4 Hz, 2 H), 7.73 (d, J = 7.2 Hz, 2 H), 7.68 (d, J = 7.6 Hz, 2 H), 7.50-7.15 (m, 8 H), 7.01 (t, J = 8.4 Hz, 1 H), 4.51 (d, J = 6.4 Hz, 2 H), 3.30 (s, 3 H), 3.2 (s, 3 H).

Example 2336

cis- N^2 -{4-[2-(4-Bromo-2-trifluoromethoxy-benzylamino)-ethyl]-cyclohexyl}- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid

Step A: Synthesis of cis-[4-(2-benzyloxycarbonylamino-ethyl)-cyclohexyl]-carbamic acid tert-butyl ester.

To a solution of cis-[4-(2-amino-ethyl)-cyclohexyl]-carbamic acid tert-butyl ester (4.84 g, 20 mmol) in CH₂Cl₂ (50 mL) and triethylamine (3.06 mL, 22 mmol) was added benzyl chloroformate (3.13 mL, 22 mmol) and the mixture was stirred for 4 hr. The resulting mixture was washed with water, 1 M aqueous HCl, dried over Na₂SO₄, filtered and concentrated. The residue was purified by column chromatography (silica gel,

CH₂Cl₂ to 10% MeOH in CH₂Cl₂) to give *cis*-[4-(2-benzyloxycarbonylamino-ethyl)-cyclohexyl]-carbamic acid *tert*-butyl ester (5.46 g, 73%) as a colorless oil.

ESI MS m/e 377 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.36-7.24 (m, 5 H), 7.19 (t, J = 5.6 Hz, 1 H), 6.76 (d, J = 6.8 Hz, 1 H), 4.91 (s, 2 H), 3.40 (m, 1 H), 2.99 (m, 2 H), 1.44-1.33 (m, 20H).

Step B: Synthesis of cis-[2-(4-amino-cyclohexyl)-ethyl]-carbamic acid benzyl ester.

A solution of cis-[4-(2-benzyloxycarbonylamino-ethyl)-cyclohexyl]-carbamic acid tert-butyl ester (5.26 g, 14 mmol) in 50% TFA in CH_2Cl_2 (60 mL) was stirred at ambient temperature for 1 hr. The mixture was concentrated and the residue was diluted with saturated aqueous NaHCO₃. The aqueous layer was extracted with CH_2Cl_2 (therr times). The organic layer was dried over Na_2SO_4 and concentrated to give cis-[2-(4-amino-cyclohexyl)-ethyl]-carbamic acid benzyl ester (3.5 g, 91%) as a colorless oil. ESI MS m/e 277 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.72 (b, 2 H), 7.34-7.27 (m, 5

ESI MS m/e 277 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.72 (b, 2 H), 7.34-7.27 (m, 5 H), 7.21 (t, J = 5.2 Hz, 1 H), 4.97 (s, 2 H), 3.14 (m, 1 H), 2.99 (q, J = 6.4 Hz, 2 H), 1.58-1.34 (m, 11 H).

Step C: Synthesis of cis{2-[4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexyl]-ethyl}-carbamic acid benzyl ester.

A mixture of (2-chloro-quinazolin-4-yl)-dimethyl-amine obtained in step B of example 1 (2.45 g, 10.2 mmol) and cis-[2-(4-amino-cyclohexyl)-ethyl]-carbamic acid benzyl ester (3.3 g, 10.2 mmol) and triethylamine (1.65 mL, 10.2 mmol) in 2-propanol (15 mL) was heated at 170 °C for 45 min using a Smith Microwave Synthesizer. The mixture was concentrated and the residue was purified by column chromatography (silica gel, CH₂Cl₂ to 10% 2 M NH₃/MeOH in CH₂Cl₂) to give cis{2-[4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexyl]-ethyl}-carbamic acid benzyl ester (4.48g, 85%) as a yellow oil. ESI MS m/e 448 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) 8 8.07-7.20 (m, 11 H), 4.98 (s, 2 H), 4.08 (m, 1 H), 3.39 (b, 6 H), 3.04 (m, 2 H), 1.7-1.3 (m, 11 H).

Step D: Synthesis of $cis-N^2-[4-(2-amino-ethyl)-cyclohexyl]-N^4,N^4-dimethyl-quinazoline-2,4-diamine.$

To a solution of cis-{2-[4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexyl]-

ethyl}-carbamic acid benzyl ester (4.47 g, 10 mmol) in EtOH (20 mL) was added 1,4-cyclohexadiene (20 mL) and 200 mg of 10% Pd/C. The reaction mixture was stirred at ambient temperature for 18 hr, filtered through pad of celite, and concentrated. The residue was purified by column chromatography (silica gel, 5% to 15% 2 M NH₃/MeOH in CH₂Cl₂) to give *cis-N*²-[4-(2-amino-ethyl)-cyclohexyl]-*N*⁴,*N*⁴-dimethyl-quinazoline-2,4-diamine (2.41g, 77%) as a yellow oil.

ESI MS m/e 314 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.82 (d, J = 8.0 Hz, 1 H), 7.44 (t, J = 6.8 Hz, 1 H), 7.27 (d, J = 8.0 Hz, 1 H), 6.97 (t, J = 6.8 Hz, 1 H), 6.31 (brs, 1 H), 3.97 (m, 1 H), 3.37 (b, 2 H), 3.17 (s, 3), 3.14 (s, 3 H), 2.62 (t, J = 7.6 Hz, 2 H), 1.68-1.31 (m, 11 H).

Step E: Synthesis of $cis-N^2$ -{4-[2-(4-bromo-2-trifluoromethoxy-benzylamino)-ethyl]-cyclohexyl}- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid.

A solution of $cis-N^2$ -[4-(2-amino-ethyl)-cyclohexyl]- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine (31.4 mg, 0.1 mmol) and 4-bromo-2-trifluoromethoxy benzaldehyde (26.9 mg, 0.1 mmol) in MeOH (1 mL) was stirred at ambient temperature. After 3 hr, NaBH(OAc)₃ (85 mg, 0.4 mmol) was added and the resulting mixture was stirred at ambient temperature for overnight. The reaction mixture was quenched with 50% DMSO in water (2 mL). The mixture was concentrated and purified by preparative HPLC. The pure fractions were combined and lyophilized to give $cis-N^2$ -{4-[2-(4-bromo-2-trifluoromethoxy-benzylamino)-ethyl]-cyclohexyl}- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoroacetic acid (32.2 mg, 41%) as a white solid.

ESI MS m/e 566/568 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 12.76 (brs, 1 H), 8.81 (b, 2 H), 8.43 (m, 1 H), 8.09 (d, J = 8.4 Hz, 1 H), 7.71-7.56 (m, 4 H), 7.35 (d, J = 8.0 Hz, 1 H), 7.29 (t, J = 8.0 Hz, 1 H), 4.15 (m, 3 H), 3.39 (m, 6 H), 2.97 (m, 2 H), 1.67-1.30 (m, 11 H).

Example 2337

cis-2,6-Dichloro-N-{2-[4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexyl]-ethyl}-benzamide trifluoro-acetic acid

Step A: Synthesis of *cis*-2,6-dichloro-*N*-{2-[4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexyl]-ethyl}-benzamide trifluoro-acetic acid.

To a solution of *cis-N*²-[4-(2-amino-ethyl)-cyclohexyl]-*N*⁴,*N*⁴-dimethyl-quinazoline-2,4-diamine (31.4 mg, 0.1 mmol) and 2,6-dichlorobenzoyl chloride (20.7 mg, 0.1 mmol) in DMF (0.5 mL) was added triethylamine (20 uL, 0.14 mmol). After stirring the mixture at ambient temperature for 6 hr, DMSO (0.5 mL) was added and the mixture was purified by preparative HPLC. The pure fractions were combined and lyophilized to give *cis*-2,6-dichloro-*N*-{2-[4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexyl]-ethyl}-benzamide trifluoro-acetic acid (17.6 mg, 29%) as a white solid.

ESI MS m/e 486 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 11.93 (brs, 1 H), 8.26 (t, J = 5.2 Hz, 1 H), 8.14 (d, J = 8.0 Hz, 1 H), 7.95 (brs, 1 H), 7.76 (t, J = 8.4 Hz, 1 H), 7.52-7.31 (m, 5 H), 4.15 (m, 1 H), 3.45 (b, 6 H), 3.29 (m, 2 H), 1.76-1.31 (m, 11 H).

Example 2338

cis- N^2 -[4-(2-Ethoxy-benzylamino)-cyclohexylmethyl]- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid

Step A: Synthesis of cis-(4-aminomethyl-cyclohexyl)-carbamic acid tert-butyl ester.

To a solution of *cis*-(4-carbamoyl-cyclohexyl)-carbamic acid *tert*-butyl ester obtained in step B of example 2332 (9.68 g, 40 mmol) in THF (100 mL) was added a solution of 1 M BH₃ in THF (80 mL, 80 mmol) over 30 min. The mixture was stirred at reflux for 2 hr. After cooling the reaction mixture to ambient temperature, 1 M aqueous sodium hydroxide was carefully added. The solvents were removed under reduced pressure and the aqueous layer was extracted with CH_2Cl_2 (twice). The organic layer was dried over sodium sulfate and concentrated under reduced pressure to give *cis*-(4-aminomethyl-cyclohexyl)-carbamic acid *tert*-butyl ester as colorless oil (5.16 g, 57%). ESI MS m/e 229 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 6.67 (d, J = 6.8 Hz, 1 H), 3.43 (m, 1 H), 2.41 (d, J = 6.4 Hz, 2 H) 1.49-1.22 (m, 18 H).

Step B: Synthesis of cis-{4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-cyclohexyl}-carbamic acid tert-butyl ester.

A mixture of *cis*-(4-aminomethyl-cyclohexyl)-carbamic acid *tert*-butyl ester (1.14 g, 5 mmol), (2-chloro-quinazoline-4-yl)-dimethyl-amine obtained in step B of example 1 (1.035 g, 5 mmol), and triethylamine (1.5 mL, 11 mmol) in 2-propanol (2.5 mL) was heated at 170 °C for 35 min using a Smith Microwave Synthesizer. The mixture was concentrated and the residue was purified by column chromatography (silica gel, CH₂Cl₂ to 10% 2 M NH₃/MeOH in CH₂Cl₂) to give *cis*-{4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-cyclohexyl}-carbamic acid *tert*-butyl ester (1.28 g, 80%) as a white solid.

ESI MS m/e 400 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 8.04-7.06 (m, 4 H), 6.77 (d, J = 6.0 Hz, 1 H), 3.40-3.16 (m, 9 H), 1.70-1.37 (m, 18 H).

Step C: Synthesis of $cis-N^2$ -(4-amino-cyclohexylmethyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine.

A solution of cis-{4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-cyclohexyl}-carbamic acid tert-butyl ester (1.2 g, 3 mmol) in 50% TFA in CH_2Cl_2 (20 mL) was stirred at ambient temperature. After 30 minutes, the mixture was concentrated and the residue was diluted with 1 M aqueous sodium hydroxide. The aqueous layer was extracted with CH_2Cl_2 (twice). The combined organic layer was dried over Na_2SO_4 , filtered and concentrated to give $cis-N^2$ -(4-amino-cyclohexylmethyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine (0.88 g, 98%) as a white solid.

ESI MS m/e 300 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.85 (d, J = 7.6 Hz, 1 H), 7.47 (t, J = 6.8 Hz, 1 H), 7.27 (brs, 1 H), 7.0 (t, J = 7.2 Hz, 1 H), 6.66 (brs, 1 H), 3.33-3.14 (m, 9 H), 1.69-1.48 (m, 9 H).

Step D: Synthesis of cis- N^2 -[4-(2-ethoxy-benzylamino)-cyclohexylmethyl]- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid.

A solution of $cis-N^2$ -(4-amino-cyclohexylmethyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine (30 mg, 0.1 mmol) and 2-ethoxy benzaldehyde (15 mg, 0.1 mmol) in MeOH (1 mL) was stirred at ambient temperature. After 3 hr, NaBH(OAc)₃ (85 mg, 0.4 mmol) was added and the mixture was stirred at ambient temperature for overnight. The resulting mixture was quenched with 50% DMSO in water (2 mL) and the solution was purified by preparative HPLC. The pure fractions were combined and lyophilized to give $cis-N^2$ -[4-(2-ethoxy-benzylamino)-cyclohexylmethyl]- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid (33 mg, 50%) as a white solid.

ESI MS m/e 434 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 13.03 (brs, 1 H), 8.79 (brs, 1 H), 8.49 (m, 2 H), 8.15 (d, J = 8.4 Hz, 1 H), 7.77 (t, J = 7.6 Hz, 1 H), 7.40-7.33 (m, 4 H), 7.07 (d, J = 7.6 Hz, 1 H), 6.99 (t, J = 7.2 Hz, 1 H), 4.11-4.06 (m, 4 H), 3.47-3.41 (m, 8 H), 3.15 (m, 1 H), 1.90-1.60 (m, 9 H), 1.37 (t, J = 7.2 Hz, 3 H).

Example 2339

cis-3,5-Dichloro-N-{4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-cyclohexyl}-benzamide trifluoro-acetic acid

Step A: Synthesis of cis-3,5-dichloro-N-{4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-cyclohexyl}-benzamide trifluoro-acetic acid.

A solution of $cis-N^2$ -(4-amino-cyclohexylmethyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-

diamine (30 mg, 0.1 mmol) and 3,5-dichlorobenzoylchloride (20.9 mg, 0.1 mmol) and pyridine (12 µL, 0.25 mmol) in DMSO (1 mL) was stirred at ambient temperature for overnight. The mixture was purified by preparative HPLC. The pure fractions were combined and lyophilized to give *cis*-3,5-dichloro-*N*-{4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-cyclohexyl}-benzamide trifluoro-acetic acid.(18 mg, 31%) as a white solid.

ESI MS m/e 472 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 12.13 (brs, 1 H), 8.34 (d, J = 7.2 Hz, 1 H), 8.15 (d, J = 8.8 Hz, 1 H), 8.06 (brs, 1 H), 7.82-7.73 (m, 4 H), 7.45 (d, J = 7.6 Hz, 1 H), 7.36 (t, J = 7.6 Hz, 1 H), 3.9 (m, 1 H), 3.47-3.25 (m, 8 H), 1.83-1.56 (m, 9 H).

Example 2340

 $trans-N^2-\{4-[(2,3-Dimethoxy-benzylamino)-methyl]-cyclohexyl\}-N^4,N^4-dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid$

Step A: Synthesis of *trans-4-(tert-*butoxycarbonylamino-methyl)-cyclohexanecarboxylic acid.

To a solution of *trans*-4-amino-cyclohexanecarboxylic acid (37.7 g, 0.24 mol) in a mixture of dioxane (250 ml) and water (200 ml) cooled in an ice bath were added 1 M aqueous sodium hydroxide (10.07 g, 0.25 mol) and (Boc)₂O (57.6 g, 0.26 mol). The reaction mixture was stirred at ambient temperature. After 3 hr, the mixture was concentrated and the residue was dissolved in water. The aqueous layer was washed with Et_2O (3 times). The aqueous layer was cooled in an ice bath and acidified with 1 M aqueous HCl (pH = 2) and the resulting white precipitate was dried to give *trans*-4-(*tert*-butoxycarbonylamino-methyl)-cyclohexanecarboxylic acid (47.4 g, 76.8%) as a white solid.

ESI MS m/e 258 M + H⁺; ¹H NMR (400 MHz, CDCl₃) δ 11.95 (brs, 1 H), 6.79 (t, J = 6.0 Hz, 1 H), 2.76 (t, J = 6.0 Hz, 2 H), 2.11 (m, 1 H), 1.87 (m, 2 H), 1.69 (m, 2 H), 1.36 (s,

9 H), 1.27 (m, 3 H), 0.9 (m, 2 H).

Step B: Synthesis of *trans*-[4-(*tert*-butoxycarbonylamino-methyl)-cyclohexyl]-carbamic acid benzyl ester.

To a solution of trans-4-(tert-butoxycarbonylamino-methyl)-cyclohexanecarboxylic acid (46.9 g, 0.18 mol) in benzene (300 mL) were added triethylamine (24.2 g, 0.24 mol) and diphenylphosphoryl azide (55.9 g, 0.20 mol). The reaction mixture was stirred at 80 °C for 1 hr. To the mixture was added benzyl alcohol (25.9 g, 0.24 mol) and stirred at 100 °C for 4 hr. The mixture was subsequently cooled to ambient temperature for overnight, concentrated, and the resulting pale orange solid dissolved in EtOAc. The organic layer was washed with water (three times), concentrated, and the residue was purified by column chromatography (silica gel, 50% EtOAc in hexane) to give trans-[4-(tert-butoxycarbonylamino-methyl)-cyclohexyl]-carbamic acid benzyl ester (66.7g, 100%) as a white solid.

ESI MS m/e 363 M + H⁺; ¹H NMR (400 MHz, CDCl₃) δ 7.24-7.23 (m, 5 H), 5.06 (s, 2 H), 4.57 (m, 2 H), 3.44 (brs, 1 H), 2.97 (t, J = 6.4 Hz, 2 H), 2.04 (m, 2 H), 1.79 (m, 2 H), 1.43 (s, 9 H), 1.08-0.76 (m, 5 H).

Step C: Synthesis of *trans*-(4-amino-cyclohexylmethyl)-carbamic acid *tert*-butyl ester.

To a solution of *trans*-[4-(*tert*-butoxycarbonylamino-methyl)-cyclohexyl]-carbamic acid benzyl ester (5.32 g, 0.015 mol) in EtOH (200 mL) was added 10% Pd/C (50 mg). The mixture was stirred at ambient temperature under hydrogen atmosphere for 4 hr. The resulting mixture was filtered through a pad of celite and concentrated. The residue was purified by column chromatography (silica gel, 3% 2 M NH₃/MeOH in CH₂Cl₂) to give *trans*-(4-amino-cyclohexylmethyl)-carbamic acid *tert*-butyl ester as a colorless solid (3.197 g, 95.4%).

ESI MS m/e 229 M + H⁺; ¹H NMR (400 MHz, CDCl₃) δ 8.44 (brs, 1 H), 4.59 (b, 1 H), 2.96 (m, 2 H), 2.08 (m, 2 H), 1.83 (m, 2 H), 1.43 (s, 9 H), 1.08 (m, 5 H).

Step D: Synthesis of trans-N²-(4-aminomethyl-cyclohexyl)-N⁴,N⁴-dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid

A mixture of trans-(4-amino-cyclohexylmethyl)-carbamic acid tert-butyl ester

(0.24 g, 1 mmol) and (2-chloro-quinazolin-4-yl)-dimethyl-amine obtained in step B of example 1 (0.32 g, 1.4 mmol) in 2-propanol (5 mL) was heated to 170 °C for 30 min using a Smith Microwave Synthesizer. This procedure was repeated 19 times. The reaction mixtures were combined and purified by column chromatography (silica gel) to give 1.13 g of a yellow solid. The yellow solid was dissolved in 50% TFA in CH_2Cl_2 (20 mL) and the mixture was stirred at ambient temperature. After 10 hours, the mixture was concentrated and the residue was purified by preparative HPLC. The pure fractions were combined and lyophilized to give trans- N^2 -(4-aminomethyl-cyclohexyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid (0.49 g, 5%) as a white solid. ESI MS m/e 300 M + H⁺; ¹H NMR (400 MHz, CDCl₃) δ 9.16 (d, J = 5.6 Hz, 1 H), 8.11 (m, 2 H), 7.86 (d, J = 8.0 Hz, 1 H), 7.51 (t, J = 7.6 Hz, 1 H), 7.41 (d, J = 8.0 Hz, 1 H),

(m, 2 H), 7.86 (d, J = 8.0 Hz, 1 H), 7.51 (t, J = 7.6 Hz, 1 H), 7.41 (d, J = 8.0 Hz, 1 H), 7.18 (t, J = 6.8 Hz, 1 H), 3.8 (brs, 1 H), 3.47 (s, 6 H), 2.10 (m, 2 H), 1.92 (m, 2 H), 1.42-1.12 (m, 5 H).

Step E: Synthesis of $trans-N^2$ -{4-[(2,3-dimethoxy-benzylamino)-methyl]-cyclohexyl}- N^4 - N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid.

A mixture of 2,3-dimethoxy benzaldehyde (15 mg, 0.09 mmol), $trans-N^2$ -(4-aminomethyl-cyclohexyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid (28 mg, 0.053 mmol), NaBH(OAc)₃ (76 mg, 0.36 mmol), and MeOH (2 mL) was heated at 100 °C for 40 seconds using a Smith Microwave Synthesizer. The resulting mixture was purified by preparative HPLC. The pure fractions were combined and lyophilized to give $trans-N^2$ -{4-[(2,3-dimethoxy-benzylamino)-methyl]-cyclohexyl}- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid (10.2 mg, 28 %).

ESI MS m/e 450 M + H⁺; ¹H NMR (400 MHz, CDCl₃) δ 9.68 (d, J = 6.0 Hz, 1 H), 9.41 (brs, 1 H), 7.85 (d, J = 7.6 Hz, 1 H), 7.52 (t, J = 7.2 Hz, 1 H), 7.46 (d, J = 8.0 Hz, 1 H), 7.19 (t, J = 7.2 Hz, 1 H), 7.09 (t, J = 8.0 Hz, 1 H), 6.98 (d, J = 7.2 Hz, 1 H), 6.90 (d, J = 7.6 Hz, 1 H), 4.16 (s, 2 H), 3.96 (s, 3 H), 3.87 (s, 3 H), 3.75 (m, 1 H), 3.47 (m, 6 H), 2.80 (m, 2 H), 2.11 (m, 2 H), 1.86 (m, 2 H), 1.48-1.50 (m, 5 H).

Example 2341

 $cis-N^2$ -[4-(3,5-Dichloro-benzylamino)-cyclohexyl]- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid

Step A: Synthesis of *cis*-(4-tert-butoxycarbonylamino-cyclohexyl)-carbamic acid benzyl ester.

To a suspension of *cis*-4-tert-butoxycarbonylamino-cyclohexanecarboxylic acid (50.0 g, 206 mmol) in benzene were added triethylamine (26.9 g, 266 mmol) and phosphorazidic acid diphenyl ester (62.2 g, 226 mmol). The reaction mixture was stirred at 80°C for 1 hr. Benzyl alcohol (31.4 g, 290 mmol) was added and the mixture was stirred at reflux for 24 hr. The reaction mixture was concentrated and the residue was dissolved in EtOAc and H₂O. The organic layer was separated and the aqueous layer was extracted with EtOAc (twice). The combined organic layer was dried over MgSO₄, filtered, concentrated, and purified by flash chromatography (silica gel, 30% EtOAc in hexane) to give *cis*-(4-tert-butoxycarbonylamino-cyclohexyl)-carbamic acid benzyl ester (54.1 g, 76%) as a colorless oil.

ESI MS m/e 349 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.34-7.28 (m, 5 H), 7.12 (d, J = 5.6 Hz, 1 H), 6.62 (brs, 1 H), 4.98 (s, 2 H), 3.39-3.37 (m, 2 H), 1.60-1.45 (m, 8 H), 1.37 (s, 9 H).

Step B: Synthesis of cis-(4-amino-cyclohexyl)-carbamic acid tert-butyl ester.

Using the procedure for the step C of example 2340, the title compound was obtained.

ESI MS m/e 215 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 6.60 (d, J = 6.0 Hz, 1 H), 3.30-3.28 (m, 1 H), 2.74 (s, 1 H), 1.59-1.51 (m, 2 H), 1.45-1.37 (m, 15 H).

Step C: Synthesis of cis-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-826

carbamic acid tert-butyl ester.

A solution of *cis*-(4-amino-cyclohexyl)-carbamic acid *tert*-butyl ester (0.5 g, 2.3 mmol), (2-chloro-quinazolin-4-yl)-dimethly-amine obtained in step B in example 1 (0.53, 2.6 mmol), diisopropylethylamine (1.22 mL, 7.0 mmol) and 2-propanol (1.0 mL) was heated using a Smith Microwave Synthesizer at 170 °C for 1 hour. This reaction procedure was repeated 39 more times and the resulting reaction mixtures were combined. The mixture was concentrated and the residue was purified by column chromatography (silica gel, 2% to 4% 2 M NH₃/MeOH in CH₂Cl₂) to give *cis*-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-carbamic acid *tert*-butyl ester (22.1 g, 0.057 mol, 61%) as a colorless oil.

ESI MS m/e 386 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.85 (d, J = 8.0 Hz, 1 H), 7.47 (t, J = 8.4 Hz, 1 H), 7.27 (d, J = 8.0 Hz, 1 H), 7.00 (t, J = 7.6 Hz, 1 H), 6.60 (brs, 1 H), 6.18 (brs, 1 H), 3.89-3.88 (m, 1 H), 3.39 (brs, 1 H), 3.19 (s, 6 H), 1.77-1.71 (m, 2 H), 1.68-1.52 (m, 6 H), 1.38 (s, 9 H).

Step D: Synthesis of $cis-N^2$ -(4-amino-cyclohexyl)- N^4 , N^4 -dimethyl-quinazolin-2,4-diamine.

Using the procedure for the step C of example 2338, the title compound was obtained.

ESI MS m/e 286 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.84 (d, J = 8.4 Hz, 1 H), 7.45 (t, J = 6.8 Hz, 1 H), 7.26 (d, J = 8.4 Hz, 1 H), 6.99 (t, J = 7.6 Hz, 1 H), 6.20 (brs, 1 H), 3.90-3.89 (m, 1 H), 3.18 (s, 6 H), 2.79 (s, 1 H), 1.74-1.71 (m, 2 H), 1.57-1.41 (m, 8 H).

Step E: Synthesis of $cis-N^2$ -[4-(3,5-dichloro-benzylamino)-cyclohexyl]- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid.

To a solution of $cis-N^2$ -(4-amino-cyclohexyl)- N^4 , N^4 -dimethyl-quinazolin-2,4-diamine (31.4 mg, 0.11 mmol) in MeOH (0.5 mL) was added 3,5-dichlorobenzaldehyde (17.5 mg, 0.10 mmol). The mixture was stirred at ambient temperature for 0.5 hr and sodium triacetoxyborohydride (85 mg, 0.40mmol) was added. The mixture was stirred for overnight and the reaction was quenched with 50% DMSO in water (1.0 mL). The mixture was purified by preparative HPLC. The pure fractions were combined and lyophilized to give $cis-N^2$ -[4-(3,5-dichloro-benzylamino)-cyclohexyl]- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine ditrifluoro-acetic acid (23 mg, 0.041 mmol, 37%) as a white

solid.

ESI MS m/e 444 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 13.55 (s, 1 H), 8.90 (brs, 3 H), 8.17 (d, J = 8.0 Hz, 1 H), 7.79 (t, 7.6 Hz, 1 H), 7.68 (s, 1 H), 7.61 (s, 2 H), 7.41 (d, J = 7.6 Hz, 1 H), 7.36 (t, J = 7.6 Hz, 1 H), 4.23 (s, 2 H), 4.07 (s, 1 H), 3.48 (s, 6 H), 2.00-1.92 (m, 4 H), 1.82-1.74 (m, 4 H).

Example 2342

cis-N-[4-(4-Dimethylamino-quinazolin-2-ylamino)-cyclohexyl]-3,4-difluoro-benzamide trifluoro-acetic acid.

Step A: Synthesis of *cis-N*-[4-(4-dimethylamino-quinazolin-2-ylamino)-cyclohexyl]-3,4-difluoro-benzamide trifluoro-acetic acid.

Using the procedure for the step A of example 2333, the title compound was obtained.

ESI MS m/e 426 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 12.46 (brs, 1 H), 8.36 (s, 1 H), 8.15 (d, J = 8.0 Hz, 1 H), 7.97 (brs, 1 H), 7.94-7.89 (m, 1 H), 7.77-7.73 (m, 2 H), 7.56-7.49 (m, 1 H), 7.41 (brs, 1 H), 7.36 (t, J = 7.6 Hz, 1 H), 4.07 (m, 1 H), 3.87 (m, 1 H), 3.47 (brs, 6 H), 1.89 (m, 2 H), 1.74 (m, 6 H).

Example 2343

cis-4-Dimethlyamino-N-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-benzamide ditrifluoro-acetic acid

Step A: Synthesis of *cis*-4-dimethlyamino-N-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-benzamide ditrifluoro-acetic acid.

To a solution of 4-dimethylaminobenzoic acid (16.5 mg, 0.10 mmol) in DMF (0.5 mL) were added HATU (45.6 mg, 0.12 mmol), diisopropylethylamine (34.8 uL, 0.20 mmol), and cis-N²-(4-amino-cyclohexyl)-N⁴,N⁴-dimethyl-quinazolin-2,4-diamine obtained in step D of example 2341 (28.5 mg, 0.10 mmol) and stirred at ambient temperature for overnight. The resulting mixture was diluted with DMSO (0.5 mL) and purified by preparative HPLC. The pure fractions combined and lyophilized to give cis-4-dimethlyamino-N-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-benzamide ditrifluoro-acetic acid (34.1 mg, 0.052mmol, 52%) as a white solid.

ESI MS m/e 433 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 12.73 (s, 1 H), 8.34 (s, 1 H), 8.16 (d, J = 8.0 Hz, 1 H), 7.78-7.70 (m, 4 H), 7.43 (d, J = 7.6 Hz, 1 H), 7.35 (t, J = 8.0 Hz, 1 H), 6.67 (d, J = 8.8 Hz, 2 H), 4.05 (m, 1 H), 3.86 (m, 1 H), 3.47 (s, 6 H), 2.95 (s, 3 H), 2.53 (s, 3 H), 1.91 (m, 2 H), 1.75-1.72 (m, 6 H).

Example 2344

trans-4-Bromo-N-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-2-trifluoromethoxy-benzenesulfonamide

Step A: Synthesis of trans-(4-amino-cyclohexyl)-carbamic acid tert-butyl ester.

To a solution of trans-1,4-diamino-cyclohexane (10 g, 0.088 mol) in 1,4-dioxane (400 mL) was added a solution of (Boc)₂O (4.78 g, 0.022 mol) in 1,4-dioxane (100 ml) over 30 min. The mixture was stirred at ambient temperature for overnight and then the dioxane was removed in vacuo. The resulting precipitate was dissolved in H₂O (500 mL) and left to sit for 1 hour. During this time, the di-Boc-protected diamino-cyclohexane fell out as a white crystalline precipitate. This was subsequently filtered from the aqueous solvent. The aqueous layer was extracted with EtOAc (three times). The organic layers were combined and washed with H₂O. The organic layer was dried over MgSO₄ and concentrated to give trans-(4-amino-cyclohexyl)-carbamic acid tert-butyl ester (4 g, 0.019 mol, 85%).

ESI MS m/e 215 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 6.63 (d, J = 8.0 Hz, 1 H), 3.11-3.09 (m, 1 H), 2.44-2.37 (m, 1 H), 1.70-1.67 (m, 4 H), 1.41-1.31 (m, 11 H), 1.20-0.95 (m, 4 H).

Step B: Synthesis of *trans*-[4-(4-bromo-2-trifluoromethoxy-benzenesulfonylamino)-cyclohexyl]-carbamic acid *tert*-butyl ester.

To a solution of trans-(4-amino-cyclohexyl)-carbamic acid tert-butyl ester (1 g, 0.0047 mol) in CH₂Cl₂ were added disopropylethylamine (1.63 mL, 0.0093 mol) and 4bromo-2-trifluoromethoxy-benzenesulfonyl chloride (1.03 mL, 0.0051 mol). The reaction mixture was stirred at ambient temperature for 1 hr and then washed with water. The aqueous layer was extracted with CH₂Cl₂ (twice), the organic layers were combined. dried over MgSO₄, and concentrated. The resulting precipitate was recrystallized with CH₂Cl₂ and trans-[4-(4-bromo-2-trifluoromethoxyhexanes give to benzenesulfonylamino)-cyclohexyl]-carbamic acid tert-butyl ester (2.39 g, 0.0046 mol, 99%).

ESI MS m/e 517 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.99 (d, J = 7.6 Hz, 1 H), 7.85 (d, J = 8.0 Hz, 1 H), 7.79-7.77 (m, 1 H), 6.67 (d, J = 8.0 Hz, 1 H), 3.14-2.94 (m, 2 H), 1.70-1.60 (m, 4 H), 1.34 (s, 9 H), 1.30-1.18 (m, 2 H), 1.14-1.03 (m, 2 H).

Step C: Synthesis of *trans-N*-(4-amino-cyclohexyl)-4-bromo-2-trifluoromethoxy-benzenesulfonamide.

Using the procedure for the step C of example 2338, the title compound was obtained.

ESI MS m/e 417/419 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.85 (d, J = 8.4 Hz, 1 H), 7.79-7.76 (m, 3 H), 3.32 (brs, 2 H), 3.03-2.95 (m, 1 H), 2.41-2.36 (m, 1 H), 1.67-1.57 (m, 4 H), 1.28-1.18 (m, 2 H), 0.99-0.89 (m, 2 H).

Step D: Synthesis of *trans*-4-bromo-N-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-2-trifluoromethoxy-benzenesulfonamide.

To a solution of *trans-N*-(4-amino-cyclohexyl)-4-bromo-2-trifluoromethoxy-benzenesulfonamide (100 mg, 0.24 mmol) in 2-propanol (0.5 mL) was added (2-chloro-quinazolin-4-yl)-dimethly-amine obtained in step B of example 1 (54.7 mg, 0.26mmol). The mixture was heated using a Smith Microwave Synthesizer at 170 °C for 15 min. The mixture was concentrated and the residue was purified by chromatography (2% to 4% 2 M NH₃/MeOH in CH₂Cl₂) to give *trans*-4-bromo-*N*-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-2-trifluoromethoxy-benzenesulfonamide (42 mg, 0.71 mmol, 30%) as a white solid.

ESI MS m/e 588/590 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 8.02 (d, J = 7.6 Hz, 1 H), 7.88 (d, J = 8.4 Hz, 1 H), 7.82-7.77 (m, 3 H), 7.45-7.41 (m, 1 H), 7.25-7.41 (m, 1 H), 6.99 (t, J = 7.2 Hz, 1 H), 6.37 (brs, 1 H), 3.68-3.67 (m, 1 H), 3.16 (s, 6 H), 3.09-3.02 (m, 1 H), 1.89-1.86 (m, 2 H), 1.69-1.67 (m, 2 H), 1.40-1.17 (m, 4 H).

Example 2345

trans-4'-Fluoro-biphenyl-4-carboxylic acid [4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-amide.

Step A: Synthesis of 4'-fluoro-biphenyl-4-carboxylic acid.

To a solution of 4-bromobenzoic acid (5 g, 0.025 mol) in THF (150 mL) under an

atmosphere of argon were added tetrakis(triphenylphosphine) palladium(0) (862 mg, 0.75 mmol), 2 M aqueous Na₂CO₃ (30 mL), and a solution 4-fluorophenyboronic acid (3.48 g, 0.025 mol) in a minimal amount of ethanol (~10 mL). The resulting reaction mixture was stirred at reflux under an argon atmosphere for overnight. The reaction mixture was cooled to ambient temperature and acidified with addition of 1 M HCl aqueous. The aqueous layer was extracted with Et₂O (three times). The organic layers were combined, dried over MgSO₄, filtered and concentrated. The resulting precipitate was crystallized in Et₂O and hexane to give 4'-fluoro-biphenyl-4-carboxylic acid (4.4 g, 0.020 mol, 82%) as a white solid.

¹H NMR (400 MHz, DMSO-d₆) δ 12.96 (s, 1 H), 8.00-7.98 (m, 2 H), 7.78-7.75 (m, 4 H), 7.34-7.31 (m, 2 H).

Step B: Synthesis of *trans*-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-carbamic acid *tert*-butyl ester.

Using the procedure for the step D of example 2344, the title compound was obtained.

ESI MS m/e 386 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 7.83 (d, J = 8.0 Hz, 1 H), 7.46 (t, J = 6.8 Hz, 1 H), 7.27-7.25 (m, 1 H), 6.99 (t, J = 7.2 Hz, 1 H), 6.71 (d, J = 8.4 Hz, 1 H), 6.38 (brs, 1 H), 3.72 (m, 1 H), 3.17 (s, 6 H), 1.92-1.90 (m, 2 H), 1.79-1.76 (m, 2 H), 1.37 (s, 9 H), 1.34-1.23 (m, 4 H).

Step C: Synthesis of *trans-4*'-fluoro-biphenyl-4-carboxylic acid [4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-amide.

To a solution of trans-[4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-carbamic acid tert-butyl ester (0.76 g, 0.20 mmol) in CH₂Cl₂(20 mL) was added TFA (304 μL, 0.39 mmol). The solution was stirred at ambient temperature for 4 hr. The resulting mixture was concentrated and the residue was dissolved in CH₂Cl₂. The organic layer was washed with a dilute aqueous NaOH and aqueous NaHCO₃ solution. The aqueous layer was extracted with CH₂Cl₂ (twice) and the organic layers combined, dried over MgSO₄, and concentrated. To a solution of the residue (0.1 g) and 4'-fluoro-biphenyl-4-carboxylic acid (76 mg, 0.35 mmol) in CH₂Cl₂ were added HOAt (62 mg, 0.46 mmol), WSC•HCl (87 mg, 0.46 mmol), and diisopropylethylamine (31 uL, 0.18 mmol). The mixture was stirred for 1 hr at ambient temperature and the reaction was quenched with

water. The aqueous layer was extracted with CH₂Cl₂ (twice). The organic layers were combined, dried over MgSO₄, concentrated and the residue purified by column chromatography (silica gel, 2% to 4% 2 M NH₃/MeOH in CH₂Cl₂) to give *trans*-4'-fluoro-biphenyl-4-carboxylic acid [4-(4-dimethlyamino-quinazolin-2-ylamino)-cyclohexyl]-amide (35 mg, 0.072, 21%) as a white solid.

ESI MS m/e 484 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 8.30 (brs, 1 H), 8.12 (brs, 2 H), 7.92 (d, J = 8.4 Hz, 2 H), 7.77-7.72 (m, 5 H), 7.44 (brs, 1 H), 7.34-7.28 (m, 3 H), 3.82 (brs, 2 H), 3.47 (brs, 6 H), 2.04 (m, 2 H), 1.94 (m, 2 H), 1.54-1.48 (m, 4 H).

Example 2346

2 CF₃CO₂H

cis-N²-[4-(4-Bromo-2-trifluoromethoxy-benzylamino)-cyclohexyl]-N⁴-tert-butyl-quinazoline-2,4-diamine ditrifluoro-acetic acid

Step A: Synthesis of tert-butyl-(2-chloro-quinazolin-4-yl)-amine.

To a solution of 2,4-dichloro-quinazoline obtained in step B of example 1 (4 g, 20 mmol) in THF (50 mL) were added *tert*-butyl amine (2.15 mL, 20.5 mmol) and diisopropylethylamine (3.5 mL, 21 mmol). The mixture was stirred at ambient temperature for 2 hr. The mixture was concentrated and the residue was dissolved in EtOAc. The organic layer was washed with water, dried over Na₂SO₄, and filtered. The mixture was concentrated to give *tert*-butyl-(2-chloro-quinazolin-4-yl)-amine as a white solid (3 g, 64%).

ESI MS m/e 236 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 8.40 (d, J = 8.4 Hz, 1 H), 7.75-7.36 (m, 2 H), 7.58 (d, J = 8.4 Hz, 1 H), 7.48 (t, J = 7.2 Hz, 1 H), 1.52 (s, 9 H).

Step B: Synthesis of $cis-N^2$ -(4-amino-cyclohexyl)- N^4 -tert-butyl-quinazoline-2,4-diamine.

To a suspension of cis-(4-amino-cyclohexyl)-carbamic acid tert-butyl ester (122

mg, 0.57 mmol) in 2-propanol (2 mL) were added *tert*-butyl-(2-chloro-quinazolin-4-yl)-amine (100 mg, 0.42 mmol) and diisopropylethylamine (180 μL, 1 mmol) and the mixture was heated at 170 °C for 1 hr using a Smith Microwave Synthesizer. The resulting solution was concentrated and purified by column chromatography (silica gel, 3% MeOH in CH₂Cl₂) to give [4-(4-*tert*-butylamino-quinazolin-2-ylamino)-cyclohexyl]-carbamic acid *tert*-butyl ester (112 mg, 65%) as a yellow solid. To a suspension of *cis*-[4-(4-*tert*-butylamino-quinazolin-2-ylamino)-cyclohexyl]-carbamic acid *tert*-butyl ester (95 mg, 0.23 mmol) in CH₂Cl₂ (3 mL) was added trifluoroacetic acid (2 mL) dropwise. The reaction mixture was stirred at ambient temperature for 2 hr. The solution was concentrated, alkalized with saturated aqueous NaHCO₃ and 1 M aqueous sodium hydroxide (pH = 9), and the aqueous layer was extracted with CH₂Cl₂ (three times). The combined organic layer was dried over MgSO₄, filtered, and concentrated. The solid was collected by filtration to give *cis-N*²-(4-amino-cyclohexyl)-*N*⁴-*tert*-butyl-quinazoline-2,4-diamine (44.6 mg, 53%) as a yellow solid.

ESI MS m/e 314 M + H⁺; ¹H NMR (400 MHz, CDCl₃) δ 7.48 (t, J = 6.8 Hz, 1 H), 7.38 (m, 2 H), 7.04 (t, J = 8.0 Hz, 1 H), 5.42 (brs, 1 H), 4.15 (m, 1 H), 2.85 (m, 1 H), 1.2-1.9 (m, 17 H).

Step C: Synthesis of cis-N²-[4-(4-bromo-2-trifluoromethoxy-benzylamino)-cyclohexyl]-N⁴-tert-butyl-quinazoline-2,4-diamine ditrifluoro-acetic acid.

Using the procedure for the step C of example 2341, the title compound was obtained.

ESI MS m/e 566 M + H⁺; ¹H NMR (400 MHz, CDCl₃) δ 9.36 (d, J = 8.0 Hz, 1 H), 7.67-7.64 (m, 2 H), 7.53-7.48 (m, 3 H), 7.43 (s, 1 H), 7.33 (m, 1 H), 6.17 (s, 1 H), 4.45 (m, 1 H), 4.28 (s, 2 H), 3.35 (m, 1 H), 2.14 –1.6 (m, 17 H).

Example 2347

4-Bromo-N-{4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-benzyl}-2-trifluoromethoxy-benzenesulfonamide

Step A: Synthesis of {4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-benzyl}-carbamic acid tert-butyl ester.

Using the procedure for the step D of example 2330, the title compound was obtained.

ESI MS m/e 377 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 8.38 (brs, 1 H), 8.08 (brs, 1 H), 7.70 (brs, 1 H), 7.47 (brs, 1 H), 7.36 (t, J = 6.2 Hz, 1 H), 7.30 (d, J = 8.0 Hz, 3 H), 7.16 (d, J = 7.6 Hz, 2 H), 4.60 (d, J = 6.4 Hz, 2 H), 4.07 (d, J = 6.0 Hz, 2 H), 3.39 (s, 6 H), 1.37 (s, 9 H).

Step B: Synthesis of N^2 -(4-aminomethyl-benzyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine hydrochloride.

To a cooled solution of $\{4-[(4-\text{dimethylamino-quinazolin-2-ylamino})-\text{methyl}]$ -benzyl $\}$ -carbamic acid tert-butyl ester (3.90 g, 9.57 mmol) in MeOH was added 1 M HCl in Et₂O (67.0 ml, 67.0 mmol) and the solution was stirred for overnight. The resulting mixture was concentrated to give N^2 -(4-aminomethyl-benzyl)- N^2 , N^2 -dimethyl-quinazoline-2,4-diamine hydrochloride as a white crystalline solid (3.48 g, 95.6%).

ESI MS m/e 308.2 M + H⁺; ¹H NMR (400 MHz, CD₃OD) δ 8.16 (d, J = 7.2 Hz, 1 H), 7.75 (brs, 1 H), 7.48 (m, 5 H), 7.39 (brs, 1 H), 4.76 (s, 2 H), 4.12 (s, 2 H), 3.51 (m, 6 H).

Step C: Synthesis of 4-bromo-N-{4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-benzyl}-2-trifluoromethoxy-benzenesulfonamide.

A solution of N^2 -(4-aminomethyl-benzyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine hydrochloride (50.0 mg, 0.131 mmol), 4-bromo-2-trifluoromethoxy-benzenesulfonyl chloride (53.3 mg, 0.157 mmol) and diisopropylethylamine (91 μ l, 0.524 mmol) in 2-

propanol (1.5 mL) was stirred at ambient temperature for 2 hr. The resulting mixture was concentrated, and the residue was purified by column chromatography (silica gel, 10% MeOH in CH₂Cl₂) to give 4-bromo-N-{4-[(4-dimethylamino-quinazolin-2-ylamino)-methyl]-benzyl}-2-trifluoromethoxy-benzenesulfonamide as a white crystalline compound (40 mg, 50%).

ESI MS m/e 612 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 8.51 (t, J = 6.4 Hz, 1 H), 8.06 (brs, 1 H), 7.76-7.67 (m, 4 H), 7.54-7.41 (m, 2 H), 7.24 (d, J = 7.6 Hz, 3 H), 7.14 (d, J = 8.0 Hz, 2 H), 4.56 (d, J = 6.0 Hz, 2 H), 4.08 (d, J = 6.0 Hz, 2 H), 3.36 (s, 6 H).

Example 2348

 ${\bf 4-bromo-} N-[4-(4-dimethylamino-quinazolin-2-ylamino)-phenyl]-2-trifluoromethoxy-benzenesul fonamide$

Step A: Synthesis of (4-amino-phenyl)-carbamic acid tert-butyl ester.

Using the procedure for the step A of example 2344, the title compound was obtained.

ESI MS m/e 209 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 8.75 (s, 1 H), 7.03 (d, J = 7.6 Hz, 2 H), 6.43 (dt, J = 9.5, 2.7 Hz, 2 H), 4.71 (s, 2 H), 1.43 (s, 9 H).

Step B: Synthesis of N^2 -(4-amino-phenyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine hydrochloride.

A mixture of (2-chloro-quinazolin-4-yl)-dimethyl-amine obtained in step B of example 1 (0.5 g, 2.6 mmol) and (4-amino-phenyl)-carbamic acid *tert*-butyl ester (0.5 g, 2.6 mmol) in CH₂Cl₂ (2 mL) was heated by Smith Synthesizer at 130 °C for 20 min. The mixture was concentrated to give [4-(4-dimethylamino-quinazolin-2-ylamino)-phenyl]-carbamic acid *tert*-butyl ester as a pale yellow solid (0.86 g, 87%). The reaction was repeated six times, and the total product combined was 8.5 g. To a solution of above product (8.5 g, 22.4 mmol) in MeOH (250 mL) was added 4 M HCl in dioxane (8.4 ml,

33.6 mmol) dropwise, and the mixture was stirred at ambient temperature for overnight. The mixture was concentrated to give N^2 -(4-amino-phenyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine hydrochloride as a pale pink solid (6.2 g, 87.5%).

ESI MS m/e 280 M + H⁺; ¹H NMR (400 MHz, D₂O) δ 7.84 (d, J = 8.8 Hz, 1 H), 7.54 (td, J = 7.8, 1.2 Hz, 1 H), 7.46 (dt, J = 9.5, 2.7 Hz, 2 H), 7.27-7.16 (m, 4 H), 3.35 (b, 3 H), 3.12 (b, 3 H).

Step C: Synthesis of 4-bromo-N-[4-(4-dimethylamino-quinazolin-2-ylamino)-phenyl]-2-trifluoromethoxy-benzenesulfonamide.

Using the procedure for the step C of example 2347, the title compound was obtained.

ESI MS m/e 584 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 10.27 (brs, 1 H), 9.14 (brs, 1 H), 7.98 (d, J = 8.4 Hz, 1 H), 7.80-7.71 (m, 5 H), 7.60-7.56 (m, 1 H), 7.44 (d, J = 8.4 Hz, 1 H), 7.15 (t, J = 7.4 Hz, 1 H), 6.95 (d, J = 16.8 Hz, 2 H), 9.29 (s, 6 H).

Example 2349

4'-Chloro-biphenyl-4-carboxylic acid [4-(4-dimethylamino-quinazolin-2-ylamino)-phenyl]-amide trifluoro-acetic acid

Synthesis of 4'-chloro-biphenyl-4-carboxylic acid [4-(4-dimethylamino-quinazolin-2-ylamino)-phenyl]-amide trifluoro-acetic acid.

A solution of N^2 -(4-amino-phenyl)- N^4 , N^4 -dimethyl-quinazoline-2,4-diamine hydrochloride obtained in step B of example 2348 (81.6 mg, 0.258 mmol), 4'-chloro-biphenyl-4-carboxylic acid (50.0 mg, 0.215 mmol), HATU (106 mg, 0.280 mmol), and diisopropylethylamine (150 μ L, 0.860 mmol), in CH_2Cl_2 (2 mL) was stirred at ambient temperature for overnight, and the mixture was concentrated. The residue was purifided by HPLC to give 4'-chloro-biphenyl-4-carboxylic acid [4-(4-dimethylamino-quinazolin-2-ylamino)-phenyl]-amide trifluoro-acetic acid as a white solid (10 mg, 9 %).

ESI MS m/e 494 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) δ 10.33 (s, 1 H), 8.17 (d, J = 8.0 Hz, 1 H), 8.80 (d, J = 8.8 Hz, 2 H), 7.85-7.75 (m, 7 H), 7.63-7.53 (m, 6 H), 7.36 (t, J = 7.6 Hz, 1 H), 3.46 (s, 6 H).

Example 2350

N-[1-(4-Dimethylamino-quinazolin-2-yl)-piperidin-4-ylmethyl]-2-fluoro-benzenesulfonamide

Step A: Synthesis of N-[1-(4-dimethylamino-quinazolin-2-yl)-piperidin-4-ylmethyl]-2-fluoro-benzenesulfonamide.

To a solution of 4-aminomethyl-piperidine-1-carboxylic acid tert-butyl ester (60 mg, 0.28 mmol) and diisopropylethylamine (49 mL, 0.28 mmol) in CH₂Cl₂ (2 mL) was added 2-fluorobenzenesulfonyl chloride (54 mg, 0.28 mmol) and the mixture was stirred at ambient temperature for 18 hr. To the resulting mixture was added trifluoroacetic acid (0.70 mL) and stirred at ambient temperature for 18 hr. The reaction mixture was concentrated and neutralized with saturated aqueous NaHCO₃. The aqueous layer was extracted with EtOAc, and the organic layer was concentrated to give 2-fluoro-Npiperidin-4-ylmethyl-benzenesulfonamide as a pale yellow solid. To a solution of above solid (0.076 g, 0.28 mmol) and diisopropylethylamine (0.072 mL, 0.42 mmol) in 2propanol (3 mL) was added (2-chloro-quinazolin-4-yl)-dimethyl-amine obtained in step B of example 1 (0.044 g, 0.21 mmol) and the resulting mixture was stirred at 100 °C for 18 hr. The mixture was concentrated, and the residue was purified by column chromatography (silica gel, 5% MeOH in CH₂Cl₂) to give N-[1-(4-dimethylaminoquinazolin-2-yl)-piperidin-4-ylmethyl]-2-fluoro-benzenesulfonamide as a pale yellow solid (0.024 g, 26%).

ESI MS m/e 444 M + H⁺; ¹H NMR (400 MHz, DMSO-d₆) 8 7.98 (m, 1 H), 7.86 (m, 1 H), 7.77 (m 1 H), 7.67 (m, 1 H), 7.47-7.29 (m, 4 H), 7.02 (m, 1 H), 4.69 (m, 2 H), 3.21 (s, 6 H), 2.76 (m, 4 H), 1.66 (m, 3 H), 1.00 (m, 2 H).

Using the procedure for example 2329 and purification by preparative HPLC, the compounds of example 2351 - 2819 were obtained.

Using the procedure for example 2331 and purification by preparative HPLC, the compounds of example 2820 - 2842 were obtained.

Using the procedure for example 2332, the compounds of example 2843 - 3003 were obtained.

Using the procedure for example 2333, the compounds of example 3004 - 3090 were obtained.

Using the procedure for example 2334, the compounds of example 3091 - 3161 were obtained.

Using the procedure for example 2335 and purification by preparative HPLC, the compounds of example 3162 - 3178 were obtained.

Using the procedure for example 2336, the compounds of example 3179 - 3208 were obtained.

Using the procedure for example 2337, the compounds of example 3209 was obtained.

Using the procedure for example 2338, the compounds of example 3210 - 3225 were obtained.

Using the procedure for example 2339, the compounds of example 3226 - 3228 were obtained.

Using the procedure for example 2340, the compounds of example 3229 - 3231 were obtained.

Using the procedure for example 2341, the compounds of example 3232 - 3393 were obtained.

Using the procedure for example 2342, the compounds of example 3394 - 3472 were obtained.

Using the procedure for example 2343, the compounds of example 3473 - 3527 were obtained.

Using the procedure for example 2346, the compounds of example 3528 - 3535 were obtained.

Using the procedure for example 2347 and purification by preparative HPLC, the compounds of example 3536 - 3545 were obtained.

Using the procedure for example 2348 and purification by preparative HPLC, the compounds of example 3546 - 3548 were obtained.

Using the procedure for example 2349, the compounds of example 3549 - 3567 were obtained.

Using the procedure for example 2350 and purification by preparative HPLC, the compounds of example 3568 - 3579 were obtained.

Example No.	Structure	ESI-MS	Retention Time (min)
2351	CF ₃ CO ₂ H	454.0 (M + H)	3.60
2352	N N N N N N N S O O O O O O O O O O O O	530.2 (M+H)	4.02
2353	NN NH NH SO2 2CF ₃ CO ₂ H	545.4 (M+H)	3.05
2354	CF ₃ CO ₂ H	496.4 (M + H)	3.49
2355	CF ₃ CO ₂ H	537.4 (M + H)	3.24
2356	CF ₃ CO ₂ H	440.0 (M + H)	3.47

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Example No.	Structure	ESI-MS	Retention Time (min)
2357	HN O H N N S O 2 CF ₃ CO ₂ H	484 <u>.</u> 4 (M+H)	3.49
2358	CF ₃ CO ₂ H	470.2 (M+H)	3.20
2359	2CF ₃ CO ₂ H	539.4 (M+H)	3.12
2360	CF ₃ CO ₂ H	522.2 (M+H)	4.22
2361	HN H H S O2 2CF ₃ CO ₂ H	599.0 (M+H)	3.48
2362	CF ₃ CO ₂ H	560.2 (M+H)	3.99

Example No.	Structure	ESI-MS	Retention Time (min)
2363	HN N H N S O 2	548.4 (M+H)	4.06
2364	N N H S O ₂ 2CF ₃ CO ₂ H	534.0 (M+H)	3.11
2365	$\begin{array}{c} & & \\$	502.4 (M+H)	3.81
2366	$\begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	530.2 (M+H)	4.04
2367	CF_3CO_2H	532.4 (M+H)	3.85
2368	CF ₃ CO ₂ H	520.2 (M+H)	3.86

Example No.	Structure	ESI-MS	Retention Time (min)
2369	CF ₃ CO ₂ H	474.2 (M+H)	3.72
2370	HN O O O O O O O O O O O O O O O O O O O	518.2 (M+H)	3.71
2371	2CF ₃ CO ₂ H	573.2 (M + H)	3.15
2372	$ \begin{array}{c} & \\ & \\ & \\ & \\ & \\ & \\ & \\ & $	556.2 (M+H)	4.38
2373	HN N H S O2 2CF ₃ CO ₂ H	633.4 (M+H)	3.48
2374	CF ₃ CO ₂ H	594.2 (M+H)	4.23

Example No.	Structure	ESI-MS	Retention Time (min)
2375	CF ₃ CO ₂ H	582.4 (M+H)	4.26
2376	CF ₃ CO ₂ H	536.2 (M+H)	4.06
2377	$\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	564.2 (M+H)	4.32
2378	CF ₃ CO ₂ H	566.4 (M+H)	4.11
2379	CF ₃ CO ₂ H	554.2 (M+H)	4.10
2380	CF_3CO_2H	614.2 (M+H)	4.26

Example No.	Structure	ESI-MS	Retention Time (min)
2381	CF ₃ CO ₂ H	524.4 (M+H)	3.87
2382	HN O FFF F N N N S O 2 CF3CO2H	568.2 (M+H)	3.87
2383	CF ₃ CO ₂ H	586.2 (M+H)	4.18
2384	$\begin{array}{c c} & & & & & & & & & & & & & & & & \\ & & & & $	614.2 (M+H)	4.45
2385	CF ₃ CO ₂ H	620.4 (M+H)	4.32
2386	CF ₃ CO ₂ H	468.2 (M+H)	3.20

Example No.	Structure	ESI-MS	Retention Time (min)
2387	CF ₃ CO ₂ H	551.6 (M+H)	2.82
2388	CF ₃ CO ₂ H	454.0 (M+H)	3.06
2389	HN O O O O O O O O O O O O O O O O O O O	498.6 (M+H)	3.10
2390	CF ₃ CO ₂ H	484.2 (M+H)	2.76
2391	$\begin{array}{c} & & & \\$	553.6 (M+H)	2.40
2392	HN N H S O2 CF ₃ CO ₂ H	536.4 (M+H)	3.77

Example No.	Structure	ESI-MS	Retention Time (min)
2393	HN N H S O2 2CF3CO2H	613.4 (M+H)	2.74
2394	CF ₃ CO ₂ H	623.4 (M+H)	3.06
2395	CF ₃ CO ₂ H	574.4 (M+H)	3.51
2396	CF ₃ CO ₂ H	562.2 (M+H)	3.59
2397	$\begin{array}{c c} & & & \\ & & & &$	548.6 (M+H)	2.48
2398	CF ₃ CO ₂ H	516.4 (M+H)	3.39

Example No.	Structure	ESI-MS	Retention Time (min)
2399	CF ₃ CO ₂ H	550.4 (M+H)	3.56
2400	CF ₃ CO ₂ H	546.2 (M+H)	3.38
2401	F HN N H N N N N N N N N N N N N N N N N	534.0 (M+H)	3.43
2402	CF_3CO_2H	608.2 (M+H)	3.75
2403	CF ₃ CO ₂ H	518 (M+H)	3.22
2404	$\begin{array}{c} & & \\$	562.2 (M+H)	3.20

Example No.	Structure	ESI-MS	Retention Time (min)
2405	HNNN H SO2 CF3CO2H	626.0 (M+H)	3.76
2406	CF ₃ CO ₂ H	614.0 (M+H)	3.72
2407	HN N N N N N N N N N N N N N N N N N N	610.0 (M+H)	3.57
2408	CF_3CO_2H	598.2 (M+H)	3.97
2409	CF ₃ CO ₂ H	564.2 (M+H)	3.46
2410	CF ₃ CO ₂ H	508.0 (M+H)	3.44

Example No.	Structure	ESI-MS	Retention Time (min)
2411	CF ₃ CO ₂ H	616.2 (M+H)	3.94
2412	CF ₃ CO ₂ H	604.2 (M+H)	4.51
2413	CF ₃ CO ₂ H	600.2 (M+H)	4.32
2414	CF ₃ CO ₂ H	588.0 (M+H)	4.38
2415	CF ₃ CO ₂ H	650.2 (M+H)	4.20
2416	CF ₃ CO ₂ H	726.4 (M+H)	4.52

Example No.	Structure	ESI-MS	Retention Time (min)
2417	2CF ₃ CO ₂ H	741.6 (M+H)	3.59
2418	CF ₃ CO ₂ H	692.2 (M+H)	4.12
2419	2CF ₃ CO ₂ H	767.6 (M+H)	4.59
2420	CF ₃ CO ₂ H	733.4 (M+H)	3.87
2421	CF ₃ CO ₂ H	636.2 (M+H)	4.08
2422	$\begin{array}{c} HN \\ N \\ N \\ H \\ \end{array}$ $\begin{array}{c} H \\ N \\ N \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$ $\begin{array}{c} H \\ N \\ \end{array}$ $\begin{array}{c} G_2 \\ O \\ \end{array}$	680.2 (M+H)	4.07

Example No.	Structure	ESI-MS	Retention Time (min)
2423	HN N N N N N N N N N	666.0 (M+H)	3.86
2424	HN N H SO F F F F T T T T T T T T T T T T T T T	735.4 (M+H)	3.50
2425	$\begin{array}{c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ &$	718.4 (M+H)	4.64
2426	$\begin{array}{c} & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$	795.6 (M+H)	3.70
2427	HN P F F F F CF ₃ CO ₂ H	744.2 (M+H)	4.43
2428	THE SOLUTION OF THE SOLUTION O	698.0 (M+H)	4.26

Example No.	Structure	ESI-MS	Retention Time (min)
2429	CF ₃ CO ₂ H	732.4 (M+H)	4.37
2430	HN N N N N N N N N N N N N N N N N N N	726.4 (M+H)	4.52
2431	CF ₃ CO ₂ H	728.4 (M+H)	4.36
2432	FFF NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	716.4 (M+H)	4.32
2433	CF ₃ CO ₂ H	616.0 (M+H)	4.22
2434	CF_3CO_2H	692.0 (M+H)	4.57

Example No.	Structure	ESI-MS	Retention Time (min)
2435	2CF ₃ CO ₂ H	707.2 (M+H)	3.64
2436	CF ₃ CO ₂ H	658.2 (M+H)	4.15
2437	$ \begin{array}{c} $	733.2 (M+H)	4.68
2438	CF_3CO_2H	699.2 (M+H)	3.88
2439	HN O H Br N H S O F F F CF3CO2H	646.4 (M+H)	4.08
2440	$\begin{array}{c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ &$	632.4 (M+H)	3.86

Example No.	Structure	ESI-MS	Retention Time (min)
2441	HN N H S O B F F F C C C C C C C C C C C C C C C C	701.4 (M+H)	3.51
2442	$\begin{array}{c} \begin{array}{c} & \\ & \\ \\ & \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \\ \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	684.2 (M+H)	4.75
2443	$\begin{array}{c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$	761.2 (M+H)	3.74
2444	$\begin{array}{c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$	722.2 (M+H)	4.59
2445	$\begin{array}{c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$	710.2 (M+H)	4.60
2446	$\begin{array}{c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$	696.2 (M+H)	3.53

Example No.	Structure	ESI-MS	Retention Time (min)
2447	HN N H S O2 O F F F F CF3CO2H	664.2 (M+H)	4.39
2448	HN N N N N N N N N N N N N N N N N N N	692.0 (M+H)	4.65
2449	CF ₃ CO ₂ H	698.0 (M+H)	4.59
2450	CF3CO ⁵ H	694.2 (M+H)	4.42
2451	CF ₃ CO ₂ H	682.2 (M + H)	4.42
2452	CF ₃ CO ₂ H	590.2 (M+H)	4.28

Example No.	Structure	ESI-MS	Retention Time (min)
2453	CF ₃ CO ₂ H	666.2 (M+H)	4.61
2454	$\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	681.2 (M+H)	3.72
2455	CF_3CO_2H	632.4 (M+H)	4.21
2456	$ \begin{array}{c} \downarrow \\ \downarrow \\$	707.2 (M+H)	4.70
2457	CF ₃ CO ₂ H	673.2 (M+H)	3.94
2458	CF ₃ CO ₂ H	576.2 (M+H)	4.16

Example No.	Structure	ESI-MS	Retention Time (min)
2459	CF ₃ CO ₂ H	620.4 (M+H)	4.19
2460	HN OH N F F F F F CF ₃ CO ₂ H	606.6 (M+H)	3.94
2461	$\begin{array}{c} & & & \\$	675.4 (M+H)	3.59
2462	$\begin{array}{c c} & & & & \\ & & & & \\ & & & & \\ & & & & $	658.6 (M+H)	4.82
2463	$\begin{array}{c c} & & & & & & & & & & & & & & & & \\ & & & & $	735.4 (M+H)	3.82
2464	CF ₃ CO ₂ H	696.0 (M+H)	4.56

Example No.	Structure	ESI-MS	Retention Time (min)
2465	CF ₃ CO ₂ H	684.4 (M+H)	4.61
2466	$\begin{array}{c c} & & & & \\ & & & & \\ & & & & \\ & & & & $	670.2 (M+H)	3.56
2467	CF ₃ CO ₂ H	638.2 (M+H)	4.43
2468	CF ₃ CO ₂ H	666.2 (M+H)	4.68
2469	CF ₃ CO ₂ H	672.2 (M+H)	4.60
2470	CF ₃ CO ₂ H	668.2 (M+H)	4.44

Example No.	Structure	ESI-MS	Retention Time (min)
2471	CF ₃ CO ₂ H	656.4 (M+H)	4.47
2472	2CF ₃ CO ₂ H	595.4 (M+H)	3.32
2473	CF ₃ CO ₂ H	534.0 (M+H)	3.81
2474	CF ₃ CO ₂ H	520.4 (M+H)	3.56
2475	2CF ₃ CO ₂ H	589.2 (M+H)	3.25
2476	CF ₃ CO ₂ H	572.4 (M+H)	4.47

Example No.	Structure	ESI-MS	Retention Time (min)
2477	2CF ₃ CO ₂ H	649.4 (M+H)	3.50
2478	CF ₃ CO ₂ H	610.4 (M+H)	4.26
2479	HN H S S S S S S S S S S S S S S S S S S	598.2 (M+H)	4.30
2480	HN N N N N N N N N N N N N N N N N N N	584.4 (M+H)	3.29
2481	CF ₃ CO ₂ H	552.6 (M+H)	4.11
2482	CF ₃ CO ₂ H	580.6 (M+H)	4.40

Example No.	Structure	ESI-MS	Retention Time (min)
2483	CF ₃ CO ₂ H	586.2 (M+H)	4.30
2484	CF ₃ CO ₂ H	582.4 (M+H)	4.14
2485	F HN N N N N N N N N N N N N N N N N N N N	570.2 (M+H)	4.14
2486	CF ₃ CO ₂ H	504.2 (M+H)	3.94
2487	CF ₃ CO ₂ H	580.6 (M+H)	4.34
2488	2CF ₃ CO₂H	595.2 (M+H)	3.41

Example No.	Structure	ESI-MS	Retention Time (min)
2489	CF ₃ CO ₂ H	490.2 (M+H)	3.84
2490	CF ₃ CO ₂ H	534.2 (M+H)	3.84
2491	CF ₃ CO ₂ H	520.4 (M+H)	3.60
2492	2CF ₃ CO ₂ H	589.2 (M+H)	3.29
2493	CF ₃ CO ₂ H	572.4 (M+H)	4.51
2494	2CF ₃ CO ₂ H	649.4 (M+H)	3.52

Example No.	Structure	ESI-MS	Retention Time (min)
2495	CF ₃ CO ₂ H	610.2 (M+H)	4.29
2496	HN H S S S S S S S S S S S S S S S S S S	598.2 (M+H)	4.34
2497	CF ₃ CO ₂ H	552.6 (M+H)	4.13
2498	CF ₃ CO ₂ H	580.6 (M+H)	4.37
2499	CF ₃ CO ₂ H	586.2 (M+H)	4.30
2500	CF ₃ CO ₂ H	570.2 (M + H)	4.18

Example No.	Structure	ESI-MS	Retention Time (min)
2501	2CF ₃ CO ₂ H	547.4 (M+H)	3.69
2502	2CF ₃ CO ₂ H	623.4 (M+H)	4.10
2503	3CF ₃ CO ₂ H	638.2 (M+H)	3.20
2504	2CF ₃ CO ₂ H	589.2 (M+H)	3.62
2505	$\begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	664.4 (M+H)	4.25
2506	2CF ₃ CO ₂ H	630.4 (M+H)	3.35

Èxample No.	Structure	ESI-MS	Retention Time (min)
2507	2CF ₃ CO ₂ H	533.2 (M+H)	3.57
2508	HN O H H S O O O O O O O O O O O O O O O O	577.6 (M+H)	3.58
2509	HN OH N N N N N N N N N N N N N N N N N N N	563.2 (M+H)	3.28
2510	HN N H S O2 H	632.6 (M+H)	3.06
2511	2CF ₃ CO ₂ H	615.4 (M+H)	4.30
2512	3CF ₃ CO ₂ H	692.2 (M+H)	3.38

Example No.	Structure	ESI-MS	Retention Time (min)
2513	HN H H S CO2 H	641.4 (M+H)	4.13
2514	2CF ₃ CO ₂ H	595.4 (M+H)	3.89
2515	2CF ₃ CO ₂ H	623.4 (M+H)	4.20
2516	CI HN N H SO2 2CF3CO2H	629.2 (M+H)	4.15
2517	2CF ₃ CO ₂ H	613.2 (M+H)	4.02
2518	CF ₃ CO ₂ H	528.2 (M+H)	4.03

Example No.	Structure	ESI-MS	Retention Time (min)
2519	CF ₃ CO ₂ H	570.2 (M+H)	3.96
2520	O N N N H O CI S CI CI CF3CO₂H	611.0 (M+H)	3.69
2521	HN N O CI H O CI S CI CI CF₃CO₂H	514.2 (M+H)	3.94
2522	PN N N N N N N N N N N N N N N N N N N	625.4 (M+H)	3.94
2523	HN N H O CI CI CI CF3CO2H	558.2 (M+H)	3.96
2524	CF ₃ CO ₂ H	544.2 (M+H)	3.67

Example No.	Structure	ESI-MS	Retention Time (min)
2525	HN N N H O CI O	613.2 (M+H)	3.31
2526	HN N H O CI S CI CF3CO2H	596.2 (M+H)	4.69
2527	HN N H N S CI CI S CI 2CF ₃ CO ₂ H	673.4 (M+H)	3.57
2528	CF ₃ CO ₂ H	634.4 (M+H)	4.41
2529	F HNNN N H H O CI S CI CI CI	622.2 (M+H)	4.45
2530	CF ₃ CO ₂ H	576 (M+H)	4.25

Example No.	Structure	ESI-MS	Retention Time (min)
2531	HN N H O CI S CI CF3CO2H	604.4 (M+H)	4.52
2532	CF ₃ CO ₂ H	610.2 (M+H)	4.40
2533	CF ₃ CO ₂ H	606.4 (M+H)	4.29
2534	HNN R N H N O CI CI CF ₃ CO ₂ H	594.2 (M+H)	4.27
2535	$2CF_3CO_2H$	571.8 (M + H)	4.99
2536	CF ₃ CO ₂ H	609.8 (M + H)	4.43

Example No.	Structure	ESI-MS	Retention Time (min)
2537	CF ₃ CO ₂ H	536.4 (M + H)	4.86
2538	CF ₃ CO ₂ H	564.6 (M + H)	5.13
2539	CF ₃ CO ₂ H	530.6 (M + H)	4.65
2540	2CF ₃ CO ₂ H	605.6 (M + H)	5.21
2541	CF ₃ CO ₂ H	571.6 (M + H)	4.45
2542	HN N N N N N N N N N N N N N N N N N N	568.8 (M + H)	4.09

Example No.	Structure	ESI-MS	Retention Time (min)
2543	CF ₃ CO ₂ H	570.6 (M + H)	5.11
2544	2CF ₃ CO ₂ H	629.6 (M + H)	4.37
2545	2CF ₃ CO ₂ H	655.6 (M + H)	5.35
2546	CF ₃ CO ₂ H	621.8 (M + H)	4.63
2547	HN N N N N N N N N N N N N N N N N N N	606.8 (M + H)	5.45
2548	CF ₃ CO ₂ H	644.6 (M + H)	5.21

Example No.	Structure	ESI-MS	Retention Time (min)
2549	HN N N N N N N N N N N N N N N N N N N	632.6 (M + H)	5.25
2550	2CF ₃ CO ₂ H	618.6 (M + H)	4.29
2551	CF ₃ CO ₂ H	616.6 (M + H)	5.14
2552	CF3CO2H	604.6 (M + H)	5.13
2553	CF ₃ CO ₂ H	544.6 (M + H)	5.03
2554	2CF ₃ CO ₂ H	585.6 (M + H)	5.13

Example No.	Structure	ESI-MS	Retention Time (min)
2555	2CF ₃ CO ₂ H	623.6 (M + H)	4.25
2556	CF ₃ CO ₂ H	574.6 (M+H)	4.73
2557	2CF ₃ CO ₂ H	649.0 (M + H)	5.25
2558	CF ₃ CO ₂ H	615.0 (M + H)	4.51
2559	HN N N N N N N N N N N N N N N N N N N	617.4 (M + H)	4.15
2560	CF ₃ CO ₂ H	600.6 (M + H)	5.37

Example No.	Structure	ESI-MS	Retention Time (min)
2561	2CF ₃ CO ₂ H	677.0 (M+H)	4.45
2562	CF ₃ CO ₂ H	638.6 (M + H)	5.18
2563	2CF ₃ CO ₂ H	612.6 (M + H)	4.16
2564	CF ₃ CO ₂ H	580.0 (M + H)	5.01
2565	HN N H O Br CF ₃ CO ₂ H	608.0 (M + H)	5.26
2566	2CF ₃ CO ₂ H	613.6 (M + H)	4.44

Example No.	Structure	ESI-MS	Retention Time (min)
2567	2CF ₃ CO ₂ H	639.6 (M + H)	5.48
2568	CF ₃ CO ₂ H	552.6 (M + H)	4.92
2569	2CF ₃ CO ₂ H	607.8 (M + H)	4.33
2570	2CF ₃ CO ₂ H	667.4 (M + H)	4.67
2571	CF ₃ CO ₂ H	628.6 (M + H)	5.29
2572	2CF ₃ CO ₂ H	602.6 (M + H)	4.35

Example No.	Structure	ESI-MS	Retention Time (min)
2573	CF ₃ CO ₂ H	570.6 (M + H)	5.23
2574	CF ₃ CO ₂ H	805.4 (M + H)	4.91
2575	2CF ₃ CO ₂ H	730.8 (M + H)	4.47
2576	CF ₃ CO ₂ H	771.6 (M + H)	4.93
2577	CF ₃ CO ₂ H	745.6 (M + H)	5.01
2578	CF ₃ CO ₂ H	580.8 (M + H)	5.18

Example No.	Structure	ESI-MS	Retention Time (min)
2579	2CF ₃ CO ₂ H	621.8 (M + H)	5.27
2580	CF ₃ CO ₂ H	587.6 (M + H)	4.51
2581	2CF ₃ CO ₂ H	584.6 (M + H)	4.21
2582	CF ₃ CO ₂ H	582.8 (M + H)	5.03
2583	CF ₃ CO ₂ H	653.8 (M + H)	4.90
2584	CF ₃ CO ₂ H	604.6 (M + H)	5.33

Example No.	Structure	ESI-MS	Retention Time (min)
2585	2CF ₃ CO ₂ H	645.6 (M + H)	5.41
2586	CF ₃ CO ₂ H	458.6 (M + H)	4.39
2587	HN N H N N N N N N N N N N N N N N N N	458.6 (M + H)	4.40
2588	THE STATE OF THE S	474.6 (M + H)	4.39
2589	CF ₃ CO ₂ H	474.6 (M + H)	4.58
2590	HN N H N O F F F CI CI CF3CO ₂ H	542.6 (M + H)	4.79

Example No.	Structure	ESI-MS	Retention Time (min)
2591	CF ₃ CO ₂ H	518.6 (M + H)	4.51
2592	HN N N H N N N N N N N N N N N N N N N	500.8 (M + H)	4.33
2593	CF ₃ CO ₂ H	524.6 (M + H)	4.61
2594	HN N N H N N N H N N N N N N N N N N N	508.6 (M + H)	4.57
2595	CF ₃ CO ₂ H	496.8 (M + H)	4.87
2596	HN N H O S S S CF3CO ₂ H	446.8 (M + H)	4.29

Example No.	Structure	ESI-MS	Retention Time (min)
2597	CF ₃ CO ₂ H	472.8 (M + H)	4.47
2598	CF ₃ CO ₂ H	472.8 (M+H)	4.53
2599	CF ₃ CO ₂ H	488.6 (M + H)	4.55
2600	CF ₃ CO ₂ H	487.6 (M + H)	4.65
2601	CF ₃ CO ₂ H	556.6 (M + H)	4.91
2602	CF_3CO_2H	532.4 (M + H)	4.61

Example No.	Structure	ESI-MS	Retention Time (min)
2603	CF ₃ CO ₂ H	514.8 (M + H)	4.43
2604	N N N N N N N N N N	538.6 (M + H)	4.80
2605	CF ₃ CO ₂ H	510.6 (M + H)	5.00
2606	CF ₃ CO ₂ H	460.6 (M + H)	4.40
2607	CF ₃ CO ₂ H	486.6 (M + H)	4.60
2608	CF ₃ CO ₂ H	484.6 (M + H)	4.64

Example No.	Structure	ESI-MS	Retention Time (min)
2609	CF ₃ CO ₂ H	503.6 (M+H)	4.74
2610	CF ₃ CO ₂ H	502.6 (M + H)	4.86
2611	CF ₃ CO ₂ H	570.8 (M + H)	5.00
2612	EF3CO2H	546.0 (M + H)	4.80
2613	ZH ZH CF3CO2H	528.8 (M + H)	4.63
2614	CF ₃ CO ₂ H	552.8 (M + H)	4.90

Example No.	Structure	ESI-MS	Retention Time (min)
2615	CF ₃ CO ₂ H	536.6 (M + H)	4.82
2616	CF ₃ CO ₂ H	524.8 (M + H)	5.07
2617	CF ₃ CO ₂ H	474.6 (M + H)	4.55
2618	CF3CO5H	468.4 (M + H)	4.59
2619	CF ₃ CO ₂ H	502.6 (M + H)	4.81
2620	CF ₃ CO ₂ H	552.8 (M + H)	4.94

Example No.	Structure Structure	ESI-MS	Retention Time (min)
2621	CF ₃ CO ₂ H	482.6 (M + H)	4.73
2622	CF ₃ CO ₂ H	546.6 (M + H)	4.85
2623	CF ₃ CO ₂ H	536.4 (M + H)	5.08
2624	CF ₃ CO ₂ H	630.4 (M + H)	5.11
2625	CE3CO ⁵ H	604.6 (M + H)	5.16
2626	CF ₃ CO ₂ H	518.6 (M + H)	4.75

Example No.	Structure	ESI-MS	Retention Time (min)
2627	CF ₃ CO ₂ H	518.6 (M+H)	4.91
2628	2CF ₃ CO ₂ H	561.6 (M + H)	4.61
2629	CF ₃ CO ₂ H	500.8 (M + H)	4.75
2630	CF ₃ CO ₂ H	500.2 (M + H)	4.85
2631	CF ₃ CO ₂ H	516.6 (M + H)	4.81
2632	CF ₃ CO ₂ H	516.6 (M+H)	4.95

Example No.	Structure	ESI-MS	Retention Time (min)
2633	CF ₃ CO ₂ H	584.6 (M + H)	5.18
2634	CF ₃ CO ₂ H	560.6 (M + H)	4.87
2635	CF ₃ CO ₂ H	542.8 (M + H)	4.80
2636	CF ₃ CO ₂ H	566.6 (M + H)	5.01
2637	CF ₃ CO ₂ H	550.8 (M + H)	4.95
2638	CF ₃ CO ₂ H	538.6 (M + H)	5.20

Example No.	Structure	ESI-MS	Retention Time (min)
2639	CF ₃ CO ₂ H	488.6 (M + H)	4.65
2640	CF ₃ CO ₂ H	482.6 (M + H)	4.73
2641	CF ₃ CO ₂ H	516.8 (M + H)	4.97
2642	CF ₃ CO ₂ H	566.6 (M + H)	5.12
2643	CF ₃ CO ₂ H	496.8 (M + H)	4.89
2644	CF ₃ CO ₂ H	560.0 (M + H)	4.98

Example No.	Structure	ESI-MS	Retention Time (min)
2645	CF ₃ CO ₂ H	550.6 (M + H)	5.21
2646	CF ₃ CO ₂ H	532.6 (M + H)	4.99
2647	CF ₃ CO ₂ H	532.6 (M + H)	5.03
2648	2CF ₃ CO ₂ H	575.8 (M + H)	4.80
2649	CF ₃ CO ₂ H	486.6 (M + H)	4.64
2650	HNN N N N N N N N N N N N N N N N N N N	486.6 (M + H)	4.66

Example No.	Structure	ESI-MS	Retention Time (min)
2651	HN N H O CI O	502.6 (M + H)	4.72
2652	CF ₃ CO ₂ H	502.6 (M + H)	4.87
2653	HN N N N N N N N N N N N N N N N N N N	570.6 (M + H)	5.03
2654	CF ₃ CO ₂ H	546.6 (M + H)	4.77
2655	CF ₃ CO ₂ H	528.8 (M + H)	4.68
2656	HN N N H O O F F CF ₃ CO ₂ H	552.8 (M + H)	4.89

Example No.	Structure	ESI-MS	Retention Time (min)
2657	CF ₃ CO ₂ H	536.6 (M + H)	4.85
2658	CF ₃ CO ₂ H	524.8 (M + H)	5.15
2659	HN N N N N N N N N N N N N N N N N N N	474.8 (M + H)	4.63
2660	CF ₃ CO ₂ H	468.4 (M + H)	4.61
2661	CF ₃ CO ₂ H	502.6 (M + H)	4.86
2662	HN N N N N N N N N N N N N N N N N N N	546.6 (M + H)	4.64

Example No.	Structure	ESI-MS	Retention Time (min)
2663	HN N N H O CI CI CI CF3CO2H	536.4 (M + H)	4.81
2664	HN N H O O F F O O F Br	630.4 (M + H)	4.85
2665	CF ₃ CO ₂ H	604.6 (M + H)	4.87
2666	HN N N N N N N N N N N N N N N N N N N	518.6 (M + H)	4.67
2667	CF ₃ CO ₂ H	518.6 (M + H)	4.90
2668	HN N H O N N N N N N N N N N N N N N N N	561.6 (M + H)	4.64

Example No.	Structure	ESI-MS	Retention Time (min)
2669	CF ₃ CO ₂ H	500.8 (M + H)	4.73
2670	HNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	500.8 (M + H)	4.74
2671	CF ₃ CO ₂ H	516.6 (M + H)	4.89
2672	CF ₃ CO ₂ H	516.6 (M + H)	4.93
2673	HN N H N S Br O Br O O O O O O O O O O O O O O O O	560.0 (M + H)	4.89
2674	CF ₃ CO ₂ H	542.8 (M + H)	4.76

Example No.	Structure	ESI-MS	Retention Time (min)
2675	CF ₃ CO ₂ H	566.6 (M + H)	5.03
2676	CF ₃ CO ₂ H	550.8 (M + H)	4.96
2677	CF ₃ CO ₂ H	538.8 (M + H)	5.25
2678	HNNN HOO O'S S	488.6 (M + H)	4.67
2679	CF ₃ CO ₂ H	482.4 (M + H)	4.71
2680	HN N N N N N N N N N N N N N N N N N N	516.6 (M + H)	4.95

Example No.	Structure	ESI-MS	Retention Time (min)
2681	CF ₃ CO ₂ H	566.8 (M + H)	5.07
2682	CF ₃ CO ₂ H	496.8 (M + H)	4.83
2683	LE SCO ₂ H	560.6 (M + H)	5.01
2684	CF ₃ CO ₂ H	550.6 (M + H)	5.07
2685	HN N N H N S O F F Br	644.6 (M + H)	5.29
2686	HNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	618.6 (M + H)	5.25

Example No.	Structure	ESI-MS	Retention Time (min)
2687	CF ₃ CO ₂ H	532.6 (M + H)	5.01
2688	CF ₃ CO ₂ H	532.6 (M + H)	5.04
2689	HN N N N N N N N N N N N N N N N N N N	575.8 (M + H)	4.75
2690	CF ₃ CO ₂ H	484.6 (M + H)	4.51
2691	CF_3CO_2H	500.8 (M + H)	4.59
2692	CF ₃ CO ₂ H	500.8 (M + H)	4.71

Example No.	Structure	ESI-MS	Retention Time (min)
2693	CF ₃ CO ₂ H	544.6 (M + H)	4.63
2694	CF ₃ CO ₂ H	526.8 (M+H)	4.55
2695	HN N H H O O F F O O F F O O F F O O O F F O O O F F O	550.6 (M + H)	4.79
2696	CF ₃ CO ₂ H	534.6 (M + H)	4.69
2697	CF ₃ CO ₂ H	522.4 (M + H)	5.03
2698	CF ₃ CO ₂ H	472.8 (M + H)	4.43

Example No.	Structure	ESI-MS	Retention Time (min)
2699	HN N N N N N N N N N N N N N N N N N N	466.6 (M + H)	4.50
2700	HN H H H H H H H H H H H H H H H H H H	550.6 (M + H)	4.87
2701	CF ₃ CO ₂ H	480.6 (M + H)	4.65
2702	CF ₃ CO ₂ H	544.6 (M + H)	4.75
2703	CF ₃ CO ₂ H	534.6 (M + H)	4.90
2704	HN N N N N N N N N N N N N N N N N N N	628.6 (M + H)	5.08

Example No.	Structure	ESI-MS	Retention Time (min)
2705	CF ₃ CO ₂ H	602.6 (M + H)	5.10
2706	HN N H O F F F F F F F F F F F F F F F F F F	516.8 (M + H)	4.71
2707	CF ₃ CO ₂ H	516.8 (M + H)	4.81
2708	HN N H N N N N N N N N N N N N N N N N	559.6 (M + H)	4.50
2709	CF ₃ CO ₂ H	498.8 (M + H)	4.64
2710	HN N H O F CF3CO2H	498.8 (M + H)	4.73

Example No.	Structure	ESI-MS	Retention Time (min)
2711	HN N H O CF ₃ CO ₂ H	514.8 (M + H)	4.87
2712	CF ₃ CO ₂ H	564.6 (M+H)	4.93
2713	CF ₃ CO ₂ H	548.6 (M + H)	4.87
2714	CF ₃ CO ₂ H	536.6 (M + H)	5.19
2715	CF ₃ CO ₂ H	603.8 (M + H)	4.76
2716	+0 ₹ 21 CF ₃ CO ₂ H	603.4 (M + H)	4.87

Example No.	Structure	ESI-MS	Retention Time (min)
2717	CF ₃ CO ₂ H	671.6 (M + H)	5.05
2718	CF ₃ CO ₂ H	647.6 (M + H)	4.79
2719	CF ₃ CO ₂ H	629.8 (M + H)	4.67
2720	CF ₃ CO ₂ H	653.8 (M + H)	4.91
2721	CF ₃ CO ₂ H	637.8 (M + H)	4.85
2722	CF ₃ CO ₂ H	625.8 (M + H)	5.14

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Example No.	Structure	ESI-MS	Retention Time (min)
2723	CF ₃ CO ₂ H	575.6 (M + H)	4.63
2724	CF ₃ CO ₂ H	569.8 (M + H)	4.66
2725	CF3CO ⁵ H	603.8 (M + H)	4.88
2726	CF ₃ CO ₂ H	653.8 (M + H)	5.01
2727	CF ₃ CO ₂ H	583.8 (M + H)	4.77
2728	CF ₃ CO ₂ H	647 (M + H)	4.92

Example No.	Structure	ESI-MS	Retention Time (min)
2729	CF ₃ CO ₂ H	637.8 (M + H)	5.13
2730	CF ₃ CO ₂ H	731.6 (M + H)	5.19
2731	CF ₃ CO ₂ H	705.8 (M + H)	5.22
2732	CF ₃ CO ₂ H	619.8 (M + H)	4.91
2733	CF ₃ CO ₂ H	619.8 (M + H)	4.93
2734	2CF ₃ CO ₂ H	663.0 (M + H)	4.67

Example No.	Structure	ESI-MS	Retention Time (min)
2735	CF ₃ CO ₂ H	631.8 (M + H)	5.01
2736	$\begin{array}{c} \text{CF}_3 \\ \text{CF}_3 \text{CO}_2 \text{H} \end{array}$	699.0 (M + H)	5.19
2737	CF ₃ CO ₂ H	675.8 (M + H)	4.95
2738	CF ₃ CO ₂ H	657.8 (M+H)	4.81
2739	CF_3CO_2H	665.8 (M + H)	4.97
2740	O NH	653.8 (M + H)	5.27

Example No.	Structure	ESI-MS	Retention Time (min)
2741	CF ₃ CO ₂ H	603.4 (M + H)	4.77
2742	O NH NH N S O O O O O O O O O O O O O O O O O O	597.8 (M + H)	4.79
2743	CF ₃ CO ₂ H	631.8 (M + H)	5.02
2744	CF ₃ CO ₂ H	681.8 (M + H)	5.14
2745	CF ₃ CO ₂ H	611.8 (M + H)	4.93
2746	CF_3CO_2H	675.0 (M + H)	5.05

Example No.	Structure	ESI-MS	Retention Time (min)
2747	CF ₃ CO ₂ H	665.8 (M + H)	5.29
2748	CF ₃ CO ₂ H	759.6 (M+H)	5.31
2749	CF ₃ CO ₂ H	733.8 (M + H)	5.36
2750	O NH	647.8 (M + H)	5.05
2751	CF ₃ CO ₂ H	647.8 (M + H)	5.08
2752	O_NH NH N N N N N N N N N N N N N N N N N	691.0 (M + H)	4.89

Example No.	Structure	ESI-MS	Retention Time (min)
2753	CF ₃ CO ₂ H	559.6 (M + H)	4.51
2754	CF ₃ CO ₂ H	575.6 (M + H)	4.57
2755	CF ₃ CO ₂ H	575.6 (M + H)	4.69
2756	CF ₃ CO ₂ H	619.6 (M + H)	4.63
2757	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	625.8 (M + H)	4.72
2758	CF ₃ CO ₂ H	609.8 (M + H)	4.67

Example No.	Structure	ESI-MS	Retention Time (min)
2759	CF ₃ CO ₂ H	541.8 (M + H)	4.45
2760	CF ₃ CO ₂ H	625.8 (M + H)	4.38
2761	CF ₃ CO ₂ H	555.8 (M + H)	4.57
2762	CF ₃ CO ₂ H	609.8 (M + H)	4.94
2763	CF_3CO_2H	677.8 (M + H)	5.05
2764	CF ₃ CO ₂ H	591.6 (M + H)	4.73

Example No.	Structure	ESI-MS	Retention Time (min)
2765	CF ₃ CO ₂ H	591.6 (M + H)	4.75
2766	2CF ₃ CO ₂ H	635.0 (M + H)	4.47
2767	H ₂ N NH CI NS O ₂ 2CF ₃ CO ₂ H	503.6 (M + H)	3.83
2768	H ₂ N NH CI NO SO ₂ CI OCC SOCO ₂ H	503.6 (M + H)	3.99
2769	H_2N NH CF_3 O_2 CI CI CI CI CI CI CI CI	571.6 (M + H)	4.16
2770	H ₂ N NH NH NH NS _{O₂} Br 2CF ₃ CO ₂ H	547.6 (M + H)	3.85

Example No.	Structure	ESI-MS	Retention Time (min)
2771	H ₂ N NH NH S ₀ 2 O	529.6 (M+H)	3.75
2772	H ₂ N NH F ₃ CO H SO ₂	553.8 (M+H)	3.99
2773	H ₂ N NH F ₃ C H SO ₂ 2CF ₃ CO ₂ H	537.6 (M + H)	. 3.93
2774	H ₂ N NH N N N N N N N N N O ₂	525.8 (M + H)	4.22
2775	H ₂ N NH N N N N N N N N N N N N N N N N N	475.6 (M + H)	3.64
2776	H ₂ N NH N N N N N N N N O ₂	469.6 (M + H)	3.71

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Example No.	Structure	ESI-MS	Retention Time (min)
2777	H ₂ N NH NH NH NH NH NH NH NH NH NH NH NH NH	503.6 (M+H)	3.97
2778	H ₂ N NH OCF ₃ 2CF ₃ CO ₂ H	553.8 (M+H)	4.17
2779	H ₂ N NH N N N N N N N N N N N N O ₂	483.4 (M + H)	3.87
2780	H_2N NH NH NH NH NH NH NH N	547.6 (M + H)	4.04
2781	H_2N NH N	537.4 (M + H)	4.23
2782	PHN NH ₂	631.6 (M + H)	4.23

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Example No.	Structure	ESI-MS	Retention Time (min)
2783	H ₂ N NH CF ₃ NH CF ₃ N CF ₃ CF ₃ 2CF ₃ CO ₂ H	605.8 (M + H)	4.41
2784	H ₂ N NH S _{O₂} 2CF ₃ CO ₂ H	519.6 (M + H)	4.01
2785	H ₂ N NH	519.6 (M+H)	4.07
2786	H ₂ N NH	562.6 (M + H)	3.77
2787	H ₂ N NH N N N N N N N N N N N O ₂ 2 2CF ₃ CO ₂ H	531.6 (M + H)	3.90
2788	H ₂ N Cl NH So ₂ 2CF ₃ CO ₂ H	531.6 (M + H)	4.04

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Example No.	Structure	ESI-MS	Retention Time (min)
2789	H ₂ N CF ₃ NH CF ₃ NH CF ₃ 2CF ₃ CO ₂ H	599.6 (M + H)	4.24
2790	H₂N NH N N N N N O ₂ B _r 2CF ₃ CO ₂ H	575.0 (M + H)	3.95
2791	H ₂ N NH NH SO O2	557.6 (M + H)	3.86
2792	H ₂ N	565.6 (M + H)	4.03
2793	H ₂ N NH N N N N N N O ₂ 2CF ₃ CO ₂ H	554 (M + H)	4.29
2794	H ₂ N NH NH NH NH NH NS O ₂	503.6 (M + H)	3.78

Example No.	Structure	ESI-MS	Retention Time (min)
2795	H ₂ N NH NH NH NH NS O ₂ 2CF ₃ CO ₂ H	497.6 (M + H)	3.83
2796	H ₂ N H CI NH H SO ₂ CI 2CF ₃ CO ₂ H	531.6 (M+H)	4.05
2797	H ₂ N, NH N OCF ₃ OCF ₃ CO ₂ H	582.0 (M + H)	4.23
2798	H ₂ N NH NH NH N N N N N N N N O ₂ 2CF ₃ CO ₂ H	511 (M+H)	3.95
2799	H ₂ N NH NH H N N H H N O ₂ Br 2CF ₃ CO ₂ H	575.6 (M + H)	4.10
2800	H ₂ N, Ci NH N N N N N N N O ₂ Cl 2CF ₃ CO ₂ H	565.0 (M + H)	4.32

Example No.	Structure	ESI-MS	Retention Time (min)
2801	H ₂ N NH F ₃ CO H SO ₂ 2CF ₃ CO ₂ H	659.6 (M + H)	4.35
2802	H ₂ N CF ₃ 2CF ₃ CO ₂ H	634.0 (M+H)	4.43
2803	H ₂ N NH N N N N N N N N N O ₂	547.6 (M + H)	4.09
2804	H ₂ N NH N N N N N N N N N N N N O ₂	547.6 (M + H)	4.15
2805	H ₂ N NH NH NH NH NH NH NH NH NH NH NH NH NH	590.6 (M + H)	3.93
2806	H₂N-NH N N S O 2 CF3CO2H	459.6 (M + H)	4.07

Example No.	Structure	ESI-MS	Retention Time (min)
2807	H ₂ N NH N N N S O 2CF ₃ CO ₂ H	477.6 (M + H)	4.07
2808	H ₂ N, NH Ch So 2 2CF ₃ CO ₂ H	475.6 (M + H)	4.07
2809	H_2N_NH H_2N	475.6 (M + H)	4.23
2810	H_2N_{NH} N_1 N_2 N_3 N_4 N_5	501.8 (M + H)	4.15
2811	H ₂ N NH N	509.4 (M + H)	4.27
2812	H ₂ N _N H N N N N O ₂ OCF ₃ O ₂ OCF ₃	525.6 (M + H)	4.37

Example Ño.	" Structure	ESI-MS	Retention Time (min)
2813	H ₂ N-NH N N N N N N N N N O ₂ Br O ₂	519.6 (M + H)	4.25
2814	H ₂ N _{NH} Ci So ₂ Ci 2CF ₃ CO ₂ H	509.4 (M + H)	4.49
2815	F ₃ CO Br H SO ₂ 2CF ₃ CO ₂ H	603.0 (M + H)	4.60
2816	H_2N_{NH} V_{N}	577.6 (M + H)	4.72
2817	H ₂ N _N H NH NH NH NH NH NH NH NH NH N	491 (M + H)	4.31
2818	H ₂ N _N H N N N N N N N N N N N N N N N N N N	491.6 (M + H)	4.33

Example No.	Structure	ESI-MS	Retention Time (min)
2819	H ₂ N _N H N N N N N N N N N N N N N	534.6 (M+H)	4.01
2820	H ₂ N H H O ₂ H O ₂ 2HCl	325.4 (M+H)	3.91
2821	H ₂ N H O CI	359.4 (M + H)	4.24
2822	H ₂ N H O O F F F SHCI	409.4 (M + H)	4.51
2823	H ₂ N H O O O O O O O O O O O O O O O O O O	339.6 (M + H)	4.09
2824	NH H₂N H O S O O Br 2HCl	403.4 (M + H)	4.28

Example No.	Structure	ESI-MS	Retention Time (min)
2825	H ₂ N H CI O CI	393.0 (M+H)	4.57
2826	NH H₂N H SO FF F F SHCI	521.6 (M+H)	4.69
2827	H ₂ N HN S F F F F F F F F F F F F F F F F F F	461.6 (M + H)	4.77
2828	H ₂ N H O O O O O O O O O O O O O O O O O O	375.4 (M + H)	4.33
2829	H₂N H O SO O SHCI	375.4 (M + H)	4.39
2830	H₂N H N N N N N N N N N N N N N N N N N	418.8 (M + H)	4.33

Example No.	Structure	ESI-MS	Retention Time (min)
2831	H ₂ N H O F O F O S	343.4 (M+H)	3.96
2832	H ₂ N H O O O O O O O O O O O O O O O O O O	343.4 (M + H)	4.03
2833	H ₂ N H O CI	359.4 (M + H)	4.05
2834	H ₂ N NH O CI O C	359.4 (M + H)	4.24
2835	NH H ₂ N H O Br O 2HCI	403.4 (M + H)	4.07
2836	H ₂ N H SOO	385.4 (M + H)	4.00

Example No.	Structure	ESI-MS	Retention Time (min)
2837	H ₂ N H O O F 2HCI	409.4 (M + H)	4.32
2838	H₂N H O S S S S S S S S S S S S S S S S S S	393.6 (M + H)	4.23
2839	H₂N H O O O O O O O O O O O O O O O O O O	381.6 (M + H)	4.62
2840	H₂N H O S S S S S S S S S S S S S S S S S S	330.8 (M + H)	3.83
2841	H ₂ N H O F F 2HCI	361.4 (M + H)	4.05
2842	H₂N H SOFF CI SFF	427.4 (M + H)	4.51

Example No.	Structure	ESI-MS	Retention Time (min)
2843	2CF ₃ CO ₂ H	458.4 (M + H)	3.22
2844	N N N N N N N N N N	415.4 (M + H)	3.01
2845	2CF ₃ CO ₂ H	432.6 (M + H)	3.26
2846	$ \begin{array}{ccccc} & & & & & & \\ & & & & & & \\ & & & & & &$	396.2 (M + H)	2.81
2847	2CF ₃ CO ₂ H	450.0 (M + H)	3.09
2848	2CF ₃ CO ₂ H	408.4 (M + H)	2.85

Example No.	Structure	ESI-MS	Retention Time (min)
2849	2CF ₃ CO ₂ H	434.4 (M + H)	2.89
2850	2CF ₃ CO ₂ H	440.0 (M + H)	3.20
2851	2CF ₃ CO ₂ H	482.4 (M + H)	3.43
2852	2CF ₃ CO ₂ H	466.4 (M + H)	2.71
2853	2CF ₃ CO ₂ H	380.2 (M + H)	2.72
2854	2CF ₃ CO ₂ H	426.2 (M + H)	2.91

Example No.	Structure	ESI-MS	Retention Time (min)
2855	2CF ₃ CO ₂ H	450.0 (M + H)	2.82
2856	NNN HOOH	434.4 (M + H)	2.69
2857	2CF ₃ CO ₂ H	440.0 (M + H)	2.85
2858	2CF ₃ CO ₂ H	550.6 (M + H)	3.80
2859	3CF ₃ CO ₂ H	441.4 (M + H)	3.03
2860	2CF ₃ CO ₂ H	446.6 (M + H)	3.41

Example No.	Structure	ESI-MS	Retention Time (min)
2861	2CF ₃ CO ₂ H	448.4 (M + H)	2.91
2862	2CF ₃ CO ₂ H	424.2 (M + H)	3.05
2863	3CF ₃ CO ₂ H	441.4 (M + H)	2.68
2864	3CF ₃ CO ₂ H	463.4 (M + H)	2.76
2865	2CF ₃ CO ₂ H	408.4 (M + H)	2.91
2866	N N N N N N N N N N	492.2 (M + H)	3.30

Example No.	Structure	ESI-MS	Retention Time (min)
2867	2CF ₃ CO ₂ H	464.2 (M + H)	2.93
2868	2CF ₃ CO ₂ H	474.4 (M + H)	3.27
2869	2CF ₃ CO ₂ H	390.6 (M + H)	2.88
2870	2CF ₃ CO₂H	482.2 (M + H)	3.43
2871	2CF ₃ CO ₂ H	408.4 (M + H)	2.91
2872	2CF ₃ CO ₂ H	420.4 (M + H)	2.91

Example No.	Structure	ESI-MS	Retention Time (min)
2873	2CF ₃ CO ₂ H	468.2 (M + H)	3.09
2874	2CF ₃ CO ₂ H	406.4 (M + H)	2.80
2875	2CF ₃ CO ₂ H	464.2 (M + H)	2.97
2876	NH NH FF B 3CF ₃ CO ₂ H	524.6 (M + H)	3.12
2877	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \end{array} \end{array} \begin{array}{c} \\ \\ \end{array} \begin{array}{c}$	442.4 (M + H)	3.10
2878	N N N N N N N N N N	426.2 (M + H)	2.90

Example No.	Structure	ESI-MS	Retention Time (min)
2879	2CF ₃ CO ₂ H	480.2 (M + H)	2.89
2880	NNNN NN N	468.2 (M + H)	3.07
2881	N N N OH OH	422.4 (M + H)	2.61
2882	2CF ₃ CO ₂ H	450.0 (M + H)	2.93
2883	2CF ₃ CO ₂ H	404.6 (M + H)	3.01
2884	2CF ₃ CO ₂ H	436.4 (M + H)	3.08

Example No.	Structure	ESI-MS	Retention Time (min)
2885	2CF ₃ CO ₂ H	440.0 (M + H)	3.18
2886	2CF ₃ CO ₂ H	470.4 (M + H)	3.25
2887	2CF ₃ CO ₂ H	450.0 (M + H)	3.01
2888	2CF ₃ CO ₂ H	466.4 (M + H)	3.40
2889	2CF ₃ CO ₂ H	415.4 (M + H)	2.83
2890	N N N N N N N N N N	458.4 (M + H)	3.25

Example No.	Structure	ESI-MS	Retention Time (min)
2891	2CF ₃ CO ₂ H	468.2 (M + H)	3.00
2892	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	406.4 (M + H)	2.66
2893	2CF ₃ CO ₂ H	420.4 (M + H)	2.92
2894	3CF ₃ CO ₂ H	379.4 (M + H)	2.71
2895	2CF ₃ CO ₂ H	434.4 (M + H)	2.87
2896	2CF ₃ CO ₂ H	480.2 (M + H)\	3.17

Example No.	Structure	ESI-MS	Retention Time (min)
2897	2CF ₃ CO ₂ H	426.2 (M + H)	2.98
2898	2CF ₃ CO ₂ H	480.2 (M + H)	2.99
2899	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	528.4 (M + H)	3.15
2900	2CF ₃ CO ₂ H	458.4 (M + H)	3.19
2901	2CF ₃ CO ₂ H	480.2 (M + H)	2.92
2902	2CF ₃ CO ₂ H	470.4 (M + H)	3.27

Example No.	Structure	ESI-MS	Retention Time (min)
2903	2CF ₃ CO ₂ H	404.6 (M + H)	2.87
2904	2CF ₃ CO ₂ H	460.4 (M + H)	3.48
2905	N N N N S N S S 2CF ₃ CO ₂ H	410.4 (M + H)	2.96
2906	2CF ₃ CO ₂ H	450.0 (M + H)	3.03
2907	2CF ₃ CO ₂ H	434.4 (M + H)	3.08
2908	2CF ₃ CO ₂ H	452.2 (M + H)	2.79

Example No.	Structure	ESI-MS	Retention Time (min)
2909	NNNN H S	396.2 (M + H)	2.81
2910	3CF₃CO₂H	459.4 (M + H)	3.21
2911	N N N N N N N N N N	458.2 (M + H)	3.08
2912	N N N N N N N N N N	410.4 (M + H)	2.88
2913	N N N N N N N N N N	426.2 (M + H)	3.01
2914	3CF ₃ CO ₂ H	429.4 (M + H)	2.97

Example No.	Structure	ESI-MS	Retention Time (min)
2915	3CF ₃ CO₂H	507.2 (M + H)	3.53
2916	2CF ₃ CO ₂ H	522.4 (M + H)	3.56
2917	3CF ₃ CO ₂ H	483.2 (M + H)	2.80
2918	N N N N N N N N N N N N N N N N N N N	507.2 (M + H)	3.27
2919	2CF ₃ CO ₂ H	474.2 (M + H)	3.10
2920	2CF ₃ CO ₂ H	450.0 (M + H)	3.00

Example No.	Structure	ESI-MS	Retention Time (min)
2921	2CF ₃ CO ₂ H	498.4 (M + H)	3.15
2922	3CF ₃ CO ₂ H	459.4 (M + H)	2.99
2923	N N N N N N N N N N	476.0 (M + H)	3.10
2924	2CF ₃ CO ₂ H	.518.2 (M + H)	3.10
2925	2CF ₃ CO ₂ H	476.2 (M + H)	3.12
2926	2CF ₃ CO ₂ H	490.4 (M + H)	3.35

Example No.	Structure	ESI-MS	Retention Time (min)
2927	2CF ₃ CO ₂ H	434.4 (M + H)	3.11
2928	2CF ₃ CO ₂ H	478.4 (M + H)	3.29
2929	N N N N N N N N N N	438.2 (M + H)	3.01
2930	3CF ₃ CO ₂ H	433.4 (M + H)	2.59
2931	$\begin{array}{c c} & & & & & & & & & & & & & & & & & & &$	438.2 (M + H)	2.90
2932	N N N N N N N N N N N N N N N N N N N	456.2 (M + H)	3.10

Example No.	Structure	ESI-MS	Retention Time (min)
2933	$ \begin{array}{c c} N & & & F \\ N & N & & & \\ N & N & & & \\ N & N & & & \\ 2CF_3CO_2H \end{array} $	492.2 (M + H)	3.25
2934	2CF ₃ CO ₂ H	476.2 (M + H)	3.11
2935	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	490.4 (M + H)	3.20
2936	N N N N N N N N N N	448.4 (M + H)	3.17
2937	2CF ₃ CO ₂ H	489.6 (M + H)	3.31
2938	2CF ₃ CO ₂ H	528.2 (M + H)	3.03

Example No.	Structure	ESI-MS	Retention Time (min)
2939	2CF ₃ CO ₂ H	476.2 (M + H)	2.99
2940	2CF ₃ CO ₂ H	447.4 (M + H)	2.66
2941	2CF ₃ CO ₂ H	532.4 (M + H)	3.66
2942	N N N N N N N N N N	514.4 (M + H)	3.08
2943	3CF ₃ CO ₂ H	393.4 (M + H)	2.79
2944	2CF ₃ CO ₂ H	474.4 (M + H)	3.24

Example No.	Structure	ESI-MS	Retention Time (min)
2945	2CF ₃ CO ₂ H	526.6 (M + H)	3.44
2946	NNNN FFF PFF 2CF3CO2H	526.6 (M + H)	3.42
2947	$ \begin{array}{c} $	490.4 (M + H)	3.35
2948	2CF ₃ CO ₂ H	462.2 (M + H)	3.43
2949	2CF ₃ CO ₂ H	418.6 (M + H)	3.13
2950	2CF ₃ CO ₂ H	458.4 (M + H)	3.10

Example No.	Structure	ESI-MS	Retention Time (min)
2951	2CF ₃ CO ₂ H	476.4 (M + H)	3.19
2952	2CF ₃ CO ₂ H	438.2 (M + H)	2.95
2953	N N N OH OH 2CF ₃ CO ₂ H	422.4 (M + H)	2.61
2954	$\begin{array}{c c} & & & & & & & & & & & & & & & & & & &$	458.2 (M + H)	3.07
2955	2CF ₃ CO ₂ H	470.4 (M + H)	3.45
2956	2CF ₃ CO ₂ H	471.6 (M + H)	. 2.88

Example No.	Structure	ESI-MS	Retention Time (min)
2957	2CF ₃ CO ₂ H	472.4 (M + H)	3.36
2958	2CF ₃ CO ₂ H	450 (M+H)	2.75
2959	2CF ₃ CO ₂ H	448.4 (M + H)	3.20
2960	2CF ₃ CO ₂ H	508.4 (M + H)	3.00
2961	2CF ₃ CO ₂ H	420.4 (M + H)	2.80
2962	$\begin{array}{c c} & & & & & & & & & & & & & & & & & & & $	474.4 (M + H)	3.20

Example No.	Structure	ESI-MS	Retention Time (min)
2963	2CF ₃ CO ₂ H	404.4 (M + H)	2.87
2964	2CF ₃ CO ₂ H	458.2 (M + H)	3.00
2965	N N N N N N N N N N N N N N N N N N N	394.4 (M + H)	2.30
2966	2CF ₃ CO ₂ H	505.4 (M + H)	2.60
2967	2CF ₃ CO ₂ H	424.2 (M + H)	3.00
2968	2CF ₃ CO ₂ H	436.4 (M + H)	2.71

Example No.	Structure	ESI-MS	Retention Time (min)
2969	2CF ₃ CO ₂ H	432.4 (M + H)	3.30
2970	2CF ₃ CO ₂ H	424.2 (M + H)	2.95
2971	2CF ₃ CO ₂ H	415.4 (M + H)	2.79
2972	$\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	480.2 (M + H)	3.00
2973	2CF ₃ CO ₂ H	496.2 (M + H)	3.46
2974	2CF ₃ CO ₂ H	562.2 (M + H)	2.99

Example No.	Structure	ESI-MS	Retention Time (min)
2975	2CF ₃ CO ₂ H	492.4 (M + H)	3.64
2976	2CF ₃ CO ₂ H	492.2 (M + H)	3.25
2977	2CF ₃ CO ₂ H	448.4 (M + H)	3.22
2978	N N N O F F	456.2 (M + H)	3.09
2979	2CF ₃ CO ₂ H	434.4 (M + H)	2.89
2980	2CF ₃ CO ₂ H	436.4 (M + H)	2.79

Example No.	Structure	ESI-MS	Retention Time (min)
2981	2CF ₃ CO ₂ H	438.2 (M + H)	2.91
2982	3CF ₃ CO ₂ H	441.4 (M + H)	2.55
2983	2CF ₃ CO ₂ H	446.4 (M + H)	3.13
2984	3CF ₃ CO ₂ H	461.4 (M + H)	2.46
2985	2CF ₃ CO ₂ H	422.2 (M + H)	3.01
2986	2CF ₃ CO ₂ H	510.2 (M + H)	2.85

Example No.	Structure	ESI-MS	Retention Time (min)
2987	2CF ₃ CO ₂ H	414.4 (M + H)	2.86
2988	2CF ₃ CO ₂ H	534.2 (M + H)	3.13
2989	2CF ₃ CO ₂ H	424.2 (M + H)	3.08
2990	$\begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	510.4 (M + H)	3.32
2991	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	510.4 (M + H)	3.17
2992	2CF ₃ CO ₂ H	476.4 (M + H)	3.17

Example No.	Structure	ESI-MS	Retention Time (min)
2993	N N N N N N N N N N	476.2 (M + H)	3.21
2994	N N N N O O O O O O O O O O O O O O O O	454.2 (M+H)	2.77
2995	2CF ₃ CO ₂ H	468.4 (M+H)	2.89
2996	2CF ₃ CO ₂ H	418.6 (M + H)	3.12
2997	$\begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \\ \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	496.4 (M + H)	3.29
2998	3CF ₃ CO ₂ H	472.6 (M + H)	2.99

Example No.	Structure	ESI-MS	Retention Time (min)
2999	2CF ₃ CO ₂ H	466.4 (M + H)	3.37
3000	2CF ₃ CO ₂ H	574.2 (M + H)	3.64
3001	2CF ₃ CO ₂ H	430.4 (M + H)	3.05
3002	2CF ₃ CO ₂ H	532.4 (M + H)	4.05
3003	PF NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	552.0 (M + H)	3.37
3004	CF ₃ CO ₂ H	448.4 (M + H)	3.51

Example No.	Structure	ESI-MS	Retention Time (min)
3005	CF ₃ CO ₂ H	454.2 (M + H)	3.91
3006	CF ₃ CO ₂ H	472.4 (M + H)	4.02
3007	CF ₃ CO ₂ H	494.4 (M + H)	4.01
3008	CF ₃ CO ₂ H	537.4 (M + H)	3.77
3009	CF ₃ CO ₂ H	418.6 (M + H)	3.63
3010	CF ₃ CO ₂ H	418.6 (M + H)	3.51

Example No.	Structure	ESI-MS	Retention Time (min)
3011	CF ₃ CO ₂ H	396.2 (M + H)	3.47
· 3012	CF ₃ CO ₂ H	434.4 (M + H)	3.52
3013	CF ₃ CO ₂ H	395.4 (M + H)	3.15
3014	CF ₃ CO ₂ H	460.2 (M + H)	4.03
3015	CF ₃ CO ₂ H	418.6 (M + H)	3.65
3016	CF ₃ CO ₂ H	462.2 (M + H)	4.09

Example No.	Structure	ESI-MS	Retention Time (min)
3017	CF ₃ CO ₂ H	484.2 (M + H)	3.79
3018	CF ₃ CO ₂ H	498.6 (M + H)	3.88
3019	$\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	483.2 (M + H)	3.80
3020	CF ₃ CO ₂ H	478.2 (M + H)	3.49
3021	CF ₃ CO ₂ H	450.0 (M + H)	3.61
3022	CF ₃ CO ₂ H	448.2 (M + H)	3.70

Example No.	Structure	ESI-MS	Retention Time (min)
3023	CF ₃ CO ₂ H	554.4 (M + H)	4.41
3024	CF ₃ CO ₂ H	598.2 (M + H)	4.03
3025	CF ₃ CO ₂ H	499.2 (M + H)	3.59
3026	CF ₃ CO ₂ H	524.6 (M + H)	3.84
3027	2CF ₃ CO ₂ H	497.4 (M + H)	3.80
3028	CF ₃ CO ₂ H	410.2 (M + H)	3.43

Example No.	Structure	ESI-MS	Retention Time (min)
3029	CF ₃ CO ₂ H	468.2 (M + H)	3.77
3030	CF_3CO_2H	463.2 (M + H)	3.73
3031	CF ₃ CO ₂ H	490.4 (M + H)	3.91
3032	N N N N N N N N N N	490.4 (M + H)	3.94
3033	CF ₃ CO ₂ H	490.4 (M + H)	3.85
3034	N N N N N N N N N N	490.4 (M + H)	3.87

Example No.	Structure	ESI-MS	Retention Time (min)
3035	CF_3CO_2H	490.4 (M + H)	3.63
3036	CF ₃ CO ₂ H	490.2 (M + H)	3.54
3037	CF_3CO_2H	540.4 (M + H)	3.95
3038	CF ₃ CO ₂ H	440.4 (M + H)	3.58
3039	CF ₃ CO ₂ H	458.4 (M + H)	3.56
3040	CF ₃ CO ₂ H	476.4 (M + H)	3.83

Example No.	Structure	ESI-MS	Retention Time (min)
3041	CF ₃ CO ₂ H	490.4 (M + H)	3.82
3042	CF ₃ CO ₂ H	508.0 (M + H)	3.85
3043	CF_3CO_2H	438.2 (M+H)	3.71
3044	CF ₃ CO ₂ H	464.2 (M + H)	3.65
3045	CF ₃ CO ₂ H	448.4 (M + H)	3.47
3046	CF ₃ CO ₂ H	440.4 (M + H)	3.59

Example No.	Structure	ESI-MS	Retention Time (min)
3047	CF ₃ CO ₂ H	464.2 (M + H)	3.36
3048	CF ₃ CO ₂ H	464.4 (M + H)	3.39
3049	CF ₃ CO ₂ H	432.4 (M + H)	3.81
3050	CF ₃ CO ₂ H	448.4 (M + H)	3.69
3051	CF ₃ CO ₂ H	438.2 (M + H)	3.69
3052	CF_3CO_2H	472.4 (M + H)	4.03

Example No	Structure	ESI-MS	Retention Time (min)
3053	CF ₃ CO ₂ H	429.2 (M + H)	3.47
3054	CF ₃ CO ₂ H	488.4 (M + H)	4.60
3055	CF ₃ CO ₂ H	424.2 (M + H)	3.41
3056	CF ₃ CO ₂ H	530.2 (M + H)	3.83
3057	CF ₃ CO ₂ H	446.4 (M + H)	4.02
3058	CF ₃ CO ₂ H	438.2 (M + H)	3.70

Example No.	Structure	ESI-MS	Retention Time (min)
3059	CF ₃ CO ₂ H	472.4 (M + H)	3.55
3060	CF ₃ CO ₂ H	506.4 (M + H)	3.71
3061	CF ₃ CO ₂ H	530.2 (M + H)	3.61
3062	CF ₃ CO ₂ H	474.4 (M + H)	4.41
3063	CF ₃ CO ₂ H	476.4 (M + H)	4.14
3064	CF ₃ CO ₂ H	502.4 (M + H)	4.83

Example No.	Structure	ESI-MS	Retention Time (min)
3065	CF ₃ CO ₂ H	480.4 (M + H)	4.09
3066	CF ₃ CO ₂ H	486.4 (M + H)	3.84
3067	CF ₃ CO ₂ H	440.4 (M + H)	3.46
3068	CF_3CO_2H	494.4 (M + H)	3.79
3069	CF ₃ CO ₂ H	472.4 (M + H)	3.55
3070	CF ₃ CO ₂ H	464.4 (M + H)	3.63

Example No.	Structure	ESI-MS	Retention Time (min)
3071	CF_3CO_2H	458.2 (M+H)	3.69
3072	CF ₃ CO₂H	440.4 (M + H)	3.69
3073	CF ₃ CO ₂ H	440.4 (M + H)	3.66
3074	CF ₃ CO ₂ H	422.4 (M + H)	3.55
3075	CF ₃ CO ₂ H	460.4 (M + H)	4.24
3076	CF ₃ CO ₂ H	429.2 (M + H)	3.42

Example No.	Structure	ESI-MS	Retention Time (min)
3077	CF ₃ CO ₂ H	434.4 (M + H)	3.61
3078	CF_3CO_2H	488.4 (M + H)	3.86
3079	CF ₃ CO ₂ H	518.6 (M + H)	4.74
3080	CF ₃ CO ₂ H	458.2 (M + H)	3.68
3081	CF ₃ CO ₂ H	410.4 (M + H)	3.58
3082	N N N N N N N N N N	540.4 (M + H)	4.19

Example No.	Structure	ESI-MS	Retention Time (min)
3083	CF ₃ CO ₂ H	422.2 (M + H)	3.50
3084	CF ₃ CO ₂ H	494.4 (M + H)	3.39
3085	CF_3CO_2H	440.0 (M + H)	3.55
3086	CF ₃ CO ₂ H	438.2 (M + H)	3.48
3087	CF ₃ CO ₂ H	454.2 (M + H)	3.75
3088	CF_3CO_2H	472.4 (M + H)	3.83

Example No.	Structure	ESI-MS	Retention Time (min)
3089	CF ₃ CO ₂ H	422.2 (M + H)	3.51
3090	CF ₃ CO ₂ H	472.4 (M + H)	3.87
3091	CF ₃ CO ₂ H	500.4 (M + H)	3.03
3092	2CF ₃ CO ₂ H	447.4 (M + H)	2.59
3093	CF3CO2H	486.4 (M + H)	3.25
3094	CF_3CO_2H	488.4 (M + H)	2.81

Example No.	Structure	ESI-MS	Retention Time (min)
3095	CF ₃ CO₂H	452.4 (M + H)	2.98
3096	CF ₃ CO ₂ H	496.4 (M + H)	3.29
3097	CF ₃ CO ₂ H	448.4 (M + H)	2.77
3098	CF ₃ CO ₂ H	458.4 (M + H)	3.06
3099	CF ₃ CO ₂ H	484.4 (M + H)	3.40
3100	CF ₃ CO ₂ H	418.6 (M + H)	2.69

Example No.	Structure	ESI-MS	Rétention Time (min)
3101	2CF ₃ CO ₂ H	496.4 (M + H)	3.01
3102	N N N N N N N N N N	483.4 (M + H)	2.79
3103	CF ₃ CO ₂ H	420.4 (M + H)	2.76
3104	CF ₃ CO ₂ H	516.2 (M + H)	3.03
3105	CF ₃ CO ₂ H	480.4 (M + H)	2.41
3106	CF ₃ CO ₂ H	483.2 (M + H)	2.84

Example No.	Structure	ESI-MS	Retention Time (min)
3107	2CF ₃ CO ₂ H	455 (M + H)	2.45
3108	2CF ₃ CO ₂ H	455.2 (M + H)	3.19
3109	N N N N N N N N N N	461.4 (M + H)	2.60
3110	2CF ₃ CO ₂ H	470.4 (M + H)	2.74
3111	CF3CO2H	446.6 (M + H)	2.61
3112	CF ₃ CO ₂ H	464.4 (M + H)	2.35

Example No.	Structure	ESI-MS	Retention Time (min)
3113	CF ₃ CO ₂ H	468.4 (M + H)	3.04
3114	2CF ₃ CO ₂ H	456.2 (M + H)	2.44
3115	2CF ₃ CO ₂ H	455.2 (M + H)	2.11
3116	CF ₃ CO ₂ H	454.2 (M + H)	3.21
3117	2CF ₃ CO ₂ H	433.6 (M + H)	2.34
3118	2CF ₃ CO ₂ H	444.6 (M+)	2.93

Example No.	Structure	ESI-MS	Retention Time (min)
3119	2CF ₃ CO ₂ H	421.4 (M + H)	2.23
3120	CF ₃ CO ₂ H	506.4 (M + H)	3.31
3121	2CF ₃ CO ₂ H	511.6 (M + H)	3.21
3122	$\begin{array}{c} N \\ N \\ N \\ N \end{array}$ $\begin{array}{c} N \\ N \\ N \\ N \end{array}$ $\begin{array}{c} O \\ N \\ O_2 \\ N \\ O \end{array}$ $\begin{array}{c} O \\ N \\ O_2 \\ N \\ O \end{array}$ $\begin{array}{c} O \\ O_2 \\ N \\ O \end{array}$ $\begin{array}{c} O \\ O_2 \\ N \\ O \end{array}$	479.4 (M + H)	3.60
3123	CF ₃ CO ₂ H	434.4 (M + H)	2.37
3124	CF_3CO_2H	516.4 (M + H)	3.02

Example No.	Structure	ESI-MS	Retention Time (min)
3125	CF ₃ CO ₂ H	394.4 (M + H)	2.45
3126	CF_3CO_2H	450.2 (M + H)	2.41
3127	2CF ₃ CO ₂ H	477.0 (M + H)	2.88
3128	2CF ₃ CO ₂ H	405.6 (M + H)	2.61
3129	CF ₃ CO ₂ H	472.6 (M + H)	3.17
3130	CF ₃ CO ₂ H	464.4 (M + H)	2.59

Example No.	Structure	ESI-MS	Retention Time (min)
3131	CF ₃ CO ₂ H	484.2 (M + H)	2.99
3132	2CF ₃ CO ₂ H	453.0 (M + H)	2.45
3133	CF_3CO_2H	488.4 (M + H)	3.59
3134	CF ₃ CO ₂ H	454.2 (M + H)	2.81
3135	2CF ₃ CO ₂ H	421.4 (M + H)	2.89
3136	CF ₃ CO ₂ H	468.4 (M + H)	2.53

Example No.	Structure	ESI-MS	Retention Time (min)
3137	2CF ₃ CO ₂ H	483.2 (M + H)	2.83
3138	CF ₃ CO ₂ H	487.4 (M+2H+)	3.40
3139	CF ₃ CO ₂ H	445.6 (M + H)	2.36
3140	2CF ₃ CO ₂ H	453.2 (M + H)	2.46
3141	CF ₃ CO ₂ H	478.4 (M + H)	2.77
3142	CF ₃ CO ₂ H	672.2 (M + H)	3.92

Example No.	Structure	ESI-MS	Retention Time (min)
3143	O OH Br N N H Br CF ₃ CO ₂ H	576.2 (M + H)	3.71
3144	2CF ₃ CO ₂ H	421.2 (M + H)	2.01
3145	N N N N N N N N N N	494.4 (M + H)	2.77
3146	2CF ₃ CO ₂ H	405.6 (M + H)	1.99
3147	CF_3CO_2H	488.4 (M + H)	3.13
3148	CF ₃ CO ₂ H	430.4 (M + H)	2.91

Example No.	Structure	ESI-MS	Retention Time (min)
3149	2CF ₃ CO ₂ H	459.4 (M + H)	2.47
3150	CF ₃ CO₂H	486.6 (M+H)	2.93
3151	CF ₃ CO ₂ H	474.4 (M + H)	3.03
3152	CF ₃ CO ₂ H	465.2 (M + H)	3.13
3153	2CF ₃ CO ₂ H	483.4 (M+H)	2.67
3154	CF ₃ CO ₂ H	556.4 (M + H)	2.84

Example No.	Structure	ESI-MS	Retention Time (min)
3155	2CF ₃ CO ₂ H	443.4 (M + H)	2.94
3156	CF ₃ CO ₂ H	508.2 (M + H)	3.20
3157	CF ₃ CO ₂ H	440.0 (M + H)	2.72
3158	CF ₃ CO ₂ H	532.4 (M + H)	3.58
3159	CF ₃ CO ₂ H	535.4 (M + H)	3.51
3160	CF ₃ CO ₂ H	504.4 (M + H)	3.49

Example No.	Structure	ESI-MS	Retention Time (min)
3161	CF ₃ CO ₂ H	572.4 (M + H)	3.71
3162	CF3CO2H	460.2 (M + H)	3.80
3163	CF ₃ CO ₂ H	589.2 (M + H)	4.00
3164	CF ₃ CO ₂ H	492.2 (M + H)	3.90
3165	CF ₃ CO ₂ H	478.2 (M + H)	3.80
3166	CF ₃ CO ₂ H	607.6 (M + H)	4.00

Example No.	Structure	ESI-MS	Retention Time (min)
3167	CF ₃ CO ₂ H	504.2 (M + H)	3.40
3168	CF ₃ CO ₂ H	506.2 (M + H)	3.90
3169	CF ₃ CO ₂ H	480.2 (M + H)	3.80
3170	CF ₃ CO ₂ H	466.2 (M + H)	3.70
3171	CF ₃ CO ₂ H	515.2 (M + H)	3.90
3172	CF ₃ CO ₂ H	644.2 (M + H)	4.10

Example No.	Structure	ESI-MS	Retention Time (min)
3173	CF ₃ CO ₂ H	488.2 (M + H)	3.90
3174	CF ₃ CO ₂ H	474.4 (M + H)	3.80
3175	CF ₃ CO ₂ H	525.4 (M + H)	3.70
3176	CF ₃ CO ₂ H	654.2 (M + H)	3.90
3177	CF₃CO₂H	428.2 (M + H)	3.10
3178	CF ₃ CO ₂ H	414.4 (M + H)	2.90

Example No.	Structure	ESI-MS	Retention Time (min)
3179	2CF ₃ CO ₂ H	506.4 (M + H)	3.04
3180	2CF ₃ CO ₂ H	578.8 (M + H)	3.50
3181	2CF ₃ CO ₂ H	520.6 (M + H)	3.19
3182	2CF ₃ CO ₂ H	448.4 (M + H)	2.80
3183	2CF ₃ CO ₂ H	494.6 (M + H)	2.66
3184	2CF ₃ CO ₂ H	478.4 (M + H)	2.66

Example No.	Structure	ESI-MS	Retention Time (min)
3185	2CF ₃ CO ₂ H	492.6 (M + H)	2.94
3186	2CF ₃ CO ₂ H	464.4 (M + H)	2.65
3187	2CF ₃ CO ₂ H	464.4 (M + H)	2.68
3188	2CF ₃ CO ₂ H	566.4 (M + H)	3.03
3189	2CF ₃ CO ₂ H	512.6 (M + H)	2.85
3190	2CF ₃ CO ₂ H	474.4 (M + H)	3.09

Example No.	Structure	ESI-MS	Retention Time (min)
3191	3CF ₃ CO ₂ H	477.4 (M + H)	2.51
3192	2CF ₃ CO ₂ H	464.4 (M + H)	2.67
3193	2CF ₃ CO ₂ H	494.6 (M + H)	2.78
3194	2CF ₃ CO ₂ H	494.6 (M + H)	2.60
3195	2CF ₃ CO ₂ H	434.6 (M + H)	2.67
3196	2CF ₃ CO ₂ H	546.4 (M + H)	4.30

Example No.	Structure	ESI-MS	Retention Time (min)
3197	2CF ₃ CO ₂ H	606.6 (M + H)	3.95
3198	2CF ₃ CO ₂ H	536.6 (M + H)	3.83
3199	2CF ₃ CO ₂ H	492.4 (M + H)	2.97
3200	$\begin{array}{c} N \\ N \\ N \\ N \end{array}$ $\begin{array}{c} N \\ N \\ N \end{array}$	478.4 (M + H)	2.79
3201	2CF ₃ CO ₂ H	542.0 (M + H)	2.85
3202	2CF ₃ CO ₂ H	492.6 (M + H)	2.81

Example No.	Structure	ESI-MS	Retention Time (min)
3203	2CF ₃ CO ₂ H	590.4 (M + H)	3.02
3204	$\begin{array}{c c} & CI \\ & H \\ & CI \\ & N \\ &$	502.2 (M + H)	2.91
3205	$\begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	480.4 (M + H)	2.51
3206	2CF ₃ CO ₂ H	536.4 (M + H)	3.21
3207	3CF ₃ CO ₂ H	443.6 (M + H)	2.66
3208	2CF ₃ CO ₂ H	536.4 (M + H)	3.08

Example No.	Structure	ESI-MS	Retention Time (min)
3209	$2CF_3CO_2H$	520.0 (M + H)	3.51
3210	2CF ₃ CO ₂ H	480.4 (M + H)	2.58
3211	NNN NH NH NH NH NH NH NH NH NH NH NH NH	552.0 (M + H)	3.11
3212	2CF ₃ CO ₂ H	464.4 (M + H)	3.22
3213	2CF ₃ CO ₂ H	450.4 (M + H)	2.70
3214	2CF ₃ CO ₂ H	450.4 (M + H)	2.58

Example No.	Structure	ESI-MS	Retention Time (min)
3215	2CF ₃ CO ₂ H	480.4 (M + H)	2.73
3216	3CF ₃ CO ₂ H	429.4 (M + H)	3.29
3217	2CF ₃ CO ₂ H	480.2 (M + H)	2.78
3218	2CF ₃ CO ₂ H	522.4 (M + H)	3.77
3219	2CF ₃ CO ₂ H	450.2 (M + H)	2.57
3220	2CF ₃ CO ₂ H	498.0 (M + H)	2.97

Example No.	Structure	ESI-MS	Retention Time (min)
3221	2CF ₃ CO ₂ H	478.4 (M+H)	3.17
3222	2CF ₃ CO ₂ H	480.0 (M+H)	3.08
3223	2CF ₃ CO ₂ H	590.2 (M + H)	4.20
3224	N N Br Br Br 2CF ₃ CO ₂ H	576.4 (M + H)	3.95
3225	$2CF_3CO_2H$	512.4 (M + H)	3.86
3226	CF ₃ CO ₂ H	472.4 (M + H)	3.07

Example No.	Structure	ESI-MS	Retention Time (min)
3227	CF ₃ CO ₂ H	540.6 (M + H)	3.75
3228	CF ₃ CO ₂ H	464.4 (M + H)	3.07
3229	2CF ₃ CO ₂ H	478.4 (M + H)	3.40
3230	$ \begin{array}{c c} N \\ N \\ N \\ H \end{array} $ $ \begin{array}{c} N \\ H \\ O \\ F \\ F \\ F \end{array} $ $ \begin{array}{c} Br \\ F \\ F \end{array} $ $ \begin{array}{c} 2CF_3CO_2H \end{array} $	552.6 (M + H)	3.50
3231	$\begin{array}{c c} & & & \\ & & & \\ N & & \\ N & & \\ N & & \\ N & & &$	590.2 (M+H)	3.60
3232	2CF ₃ CO ₂ H	418.6 (M + H)	3.25

Example No.	Structure	ESI-MS	Retention Time (min)
3233	2CF ₃ CO ₂ H	382.2 (M + H)	2.67
3234	2CF ₃ CO ₂ H	436.4 (M + H)	3.05
3235	2CF ₃ CO ₂ H	394.4 (M + H)	2.75
3236	2CF ₃ CO ₂ H	420.4 (M + H)	2.82
3237	2CF ₃ CO ₂ H	426.4 (M + H)	3.17
3238	2CF ₃ CO ₂ H	468.4 (M + H)	3.44

Example No.	Structure	ESI-MS	Retention Time (min)
3239	2CF ₃ CO ₂ H	452.2 (M + H)	2.69
3240	2CF ₃ CO ₂ H	436.4 (M + H)	2.80
3241	2CF ₃ CO ₂ H	426.2 (M + H)	2.79
3242	2CF ₃ CO ₂ H	536.4 (M + H)	3.75
3243	3CF ₃ CO ₂ H	427.2 (M + H)	2.95
3244	2CF ₃ CO ₂ H	432.4 (M + H)	3.41

Example No.	Structure	ESI-MS	Retention Time (min)
3245	2CF ₃ CO ₂ H	434.2 (M + H)	2.84
3246	2CF ₃ CO ₂ H	410.2 (M + H)	3.02
3247	3CF ₃ CO ₂ H	427.4 (M + H)	2.61
3248	2CF ₃ CO ₂ H	450.4 (M + H)	2.91
3249	FFF F NNNN PH 2CF ₃ CO ₂ H	460.4 (M + H)	3.19
3250	2CF ₃ CO ₂ H	468.4 (M + H)	2.79

Example No.	Structure	ESI-MS	Retention Time (min)
3251	2CF ₃ CO ₂ H	394.4 (M + H)	2.83
3252	2CF ₃ CO ₂ H	454.2 (M + H)	3.08
3253	NNNN HOH	392.4 (M + H)	2.73
3254	2CF ₃ CO ₂ H	450.4 (M + H)	2.92
3255	3CF ₃ CO ₂ H	510.4 (M + H)	3.17
3256	2CF ₃ CO ₂ H	428.2 (M + H)	3.08

Example No.	Structure	ESI-MS	Retention Time (min)
3257	NNN HOH	392.4 (M + H)	2.63
3258	2CF ₃ CO ₂ H	412.2 (M + H)	2.83
3259	2CF ₃ CO ₂ H	466.4 (M + H)	2.89
3260	NNN H 2CF ₃ CO ₂ H	454.0 (M + H)	3.05
3261	$\begin{array}{c} N \\ N \\ N \\ N \end{array}$	408.2 (M + H)	2.53
3262	2CF ₃ CO ₂ H	390.4 (M + H)	2.92

Example No.	Structure	ESI-MS	Retention Time (min)
3263	2CF ₃ CO ₂ H	422.2 (M + H)	3.05
3264	2CF ₃ CO ₂ H	456.4 (M + H)	3.25
3265	2CF ₃ CO ₂ H	452.2 (M + H)	3.37
3266	2CF ₃ CO ₂ H	401.2 (M + H)	2.76
3267	$\begin{array}{c c} & & & \\ & & &$	444.4 (M + H)	3.17
3268	2CF ₃ CO ₂ H	392.4 (M + H)	2.61

Example No.	Structure	ESI-MS	Retention Time (min)
3269	2CF ₃ CO ₂ H	406.4 (M + H)	2.86
3270	3CF ₃ CO ₂ H	365.4 (M + H)	2.61
3271	2CF ₃ CO ₂ H	420.4 (M + H)	2.83
3272	2CF ₃ CO ₂ H	466.4 (M + H)	3.10
3273	2CF ₃ CO ₂ H	514.4 (M + H)	3.13
3274	2CF ₃ CO ₂ H	444.4 (M + H)	3.17

Example No.	Structure	ESI-MS	Retention Time (min)
3275	2CF ₃ CO ₂ H	466.4 (M + H)	2.86
3276	2CF ₃ CO ₂ H	456.2 (M + H)	3.22
3277	2CF ₃ CO ₂ H	446.6 (M + H)	3.45
3278	2CF ₃ CO ₂ H	436.4 (M + H)	2.95
3279	$2CF_3CO_2H$	420.2 (M + H)	3.03
3280	2CF ₃ CO ₂ H	382.4 (M + H)	2.72

Example No.	Structure	ESI-MS	Retention Time (min)
3281	$\begin{array}{c c} & N & H & CI \\ & N & N & CI \\ & 2CF_3CO_2H \end{array}$	444.4 (M + H)	3.07
3282	2CF ₃ CO ₂ H	396.2 (M+H)	2.79
3283	2CF ₃ CO ₂ H	412.4 (M + H)	2.95
3284	32CF ₃ CO ₂ H	493.4 (M + H)	3.57
3285	CI S S 2CF ₃ CO ₂ H	508.2 (M + H)	3.52
3286	2CF ₃ CO ₂ H	469.6 (M + H)	2.76

Example No.	Structure	ESI-MS	Retention Time (min)
3287	3CF ₃ CO ₂ H	493.2 (M + H)	3.17
3288	2CF ₃ CO ₂ H	460.2 (M + H)	2.95
3289	2CF ₃ CO ₂ H	484.2 (M + H)	3.14
3290	FFF NNNH 2CF ₃ CO ₂ H	462.2 (M + H)	3.11
3291	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	462.2 (M + H)	3.11
3292	$\begin{array}{c} & & & \downarrow \\ & & & \downarrow \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & &$	476.4 (M + H)	3.39

Example No.	Structure	ESI-MS	Retention Time (min)
3293	2CF ₃ CO ₂ H	420.4 (M + H)	3.05
3294	2CF ₃ CO ₂ H	464.2 (M + H)	3.21
3295	2CF ₃ CO ₂ H	424.2 (M + H)	2.94
3296	3CF ₃ CO ₂ H	419.4 (M + H)	2.51
3297	3CF ₃ CO ₂ H	366.4 (M + H)	2.26
3298	2CF ₃ CO ₂ H	424.2 (M + H)	2.93

Example No.	Structure	ESI-MS	Retention Time (min)
3299	2CF ₃ CO ₂ H	442.4 (M + H)	2.97
3300	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	478.2 (M + H)	3.19
3301	$\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	462.2 (M + H)	3.05
3302	P OH 2CF ₃ CO ₂ H	476.4 (M + H)	3.20
3303	2CF ₃ CO ₂ H	366.4 (M + H)	2.64
3304	2CF ₃ CO ₂ H	412.4 (M + H)	2.85

Example No.	Structure	ESI-MS	Retention Time (min)
3305	2CF ₃ CO ₂ H	420.4 (M + H)	2.67
3306	3CF ₃ CO ₂ H	449.4 (M + H)	2.74
3307	2CF ₃ CO ₂ H	394.4 (M + H)	2.86
3308	$\begin{array}{c} CI \\ CI $	478.2 (M + H)	.3.38
3309	2CF ₃ CO ₂ H	444.4 (M + H)	3.09
3310	2CF ₃ CO ₂ H	376.4 (M + H)	2.82

Example No.	Structure	ESI-MS	Retention Time (min)
3311	NNN HOOM	406.4 (M + H)	2.87
3312	2CF ₃ CO ₂ H	436.4 (M + H)	2.91
3313	2CF ₃ CO ₂ H	426.2 (M + H)	3.13
3314	2CF ₃ CO ₂ H	436.4 (M + H)	2.99
3315	2CF ₃ CO ₂ H	454.0 (M + H)	2.97
3316	2CF ₃ CO ₂ H	412.4 (M + H)	2.92

Example No.	Structure	ESI-MS	Retention Time (min)
3317	$2CF_3CO_2H$	466.4 (M + H)	2.95
3318	2CF ₃ CO ₂ H	390.4 (M + H)	2.95
3319	2CF ₃ CO ₂ H	396.2 (M + H)	2.89
3320	2CF ₃ CO ₂ H	438.2 (M + H)	2.76
3321	3CF ₃ CO ₂ H	445.4 (M + H)	3.16
3322	N H N N N N N N N N N N N N N N N N N N	415.4 (M + H)	2.96

Example No.	Structure	ESI-MS	Retention Time (min)
3323	3CF ₃ CO ₂ H	445.4 (M + H)	2.96
3324	PHO HO CI N N N CI 2CF ₃ CO ₂ H	504.2 (M + H)	3.11
3325	2CF ₃ CO ₂ H	434.4 (M + H)	3.17
3326	PFF FS NNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNN	476.2 (M + H)	3.27
3327	2CF ₃ CO ₂ H	514.4 (M + H)	3.07
3328	$\begin{array}{c} N \\ N \\ N \\ H \end{array}$ $\begin{array}{c} H \\ F \\ F \\ F \end{array}$ $\begin{array}{c} C \\ F \\ F \end{array}$	462.2 (M + H)	2.99

Example No.	Structure	ESI-MS	Retention Time (min)
3329	2CF ₃ CO ₂ H	433.2 (M + H)	2.63
3330	CI S S 2CF ₃ CO ₂ H	518.4 (M + H)	3.63
3331	PHO Br 2CF ₃ CO ₂ H	500.4 (M + H)	3.09
3332	3CF ₃ CO ₂ H	379.4 (M + H)	2.77
3333	PF F PF	460.2 (M + H)	3.31
3334	FFF NNNN FFF 2CF3CO2H	512.4 (M + H)	3.51

Example No.	Structure	ESI-MS	Retention Time (min)
3335	$\begin{array}{c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$	512.6 (M + H)	3.51
3336	2CF ₃ CO ₂ H	476.2 (M + H)	3.39
3337	2CF ₃ CO ₂ H	448.4 (M + H)	3.42
3338	2CF ₃ CO ₂ H	404.4 (M + H)	3.17
3339	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	444.4 (M + H)	3.13
3340	PFF PFF PFF 2CF ₃ CO ₂ H	462.2 (M + H)	3.21

Example No.	Structure	ESI-MS	Retention Time (min)
3341	2CF ₃ CO ₂ H	424.2 (M + H)	2.97
3342	2CF ₃ CO ₂ H	444.6 (M + H)	3.16
3343	3CF ₃ CO ₂ H	469.4 (M + H)	3.47
3344	2CF ₃ CO ₂ H	456.4 (M + H)	3.47
3345	2CF ₃ CO ₂ H	457.4 (M + H)	3.09
3346	2CF ₃ CO ₂ H	458.2 (M + H)	3.37

Example No.	Structure	ESI-MS	Retention Time (min)
3347	2CF ₃ CO ₂ H	436.4 (M + H)	2.83
3348	2CF ₃ CO ₂ H	434.4 (M + H)	3.30
3349	2CF ₃ CO ₂ H	494.4 (M + H)	2.98
3350	2CF ₃ CO ₂ H	406.4 (M + H)	2.80
3351	PHO HANDER OF THE PROPERTY OF	460.4 (M + H)	3.20
3352	2CF ₃ CO ₂ H	390.4 (M+H)	2.97

Example No.	Structure	ESI-MS	Retention Time (min)
3353	2CF ₃ CO ₂ H	444.2 (M + H)	3.01
3354	3CF ₃ CO ₂ H	380.2 (M + H)	2.27
3355	2CF ₃ CO ₂ H	491.4 (M + H)	2.55
3356	2CF ₃ CO ₂ H	410.4 (M + H)	3.05
3357	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	422.2 (M + H)	2.69
3358	2CF ₃ CO ₂ H	418.6 (M + H)	3.36

Example No.	Structure	ESI-MS	Retention Time (min)
3359	2CF ₃ CO ₂ H	410.4 (M + H)	2.97
3360	2CF ₃ CO ₂ H	401.2 (M + H)	2.81
3361	$\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	466.2 (M + H)	3.01
3362	2CF ₃ CO ₂ H	482.4 (M + H)	3.43
3363	OH NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	548.4 (M + H)	3.03
3364	3CF ₃ CO ₂ H	543.6 (M + H)	3.95

Example No.	Structure	ESI-MS	Retention Time (min)
3365	2CF ₃ CO ₂ H	478.4 (M + H)	3.64
3366	2CF ₃ CO ₂ H	478.4 (M + H)	3.29
3367	2CF ₃ CO ₂ H	434.4 (M + H)	3.20
3368	$\begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	442.4 (M + H)	3.09
3369	2CF ₃ CO ₂ H	420.4 (M + H)	2.87
3370	$\begin{array}{c c} & & & \\ & & & \\ N & & \\ N & & & \\ N & & & \\ N &$	422.2 (M + H)	2.79

Example No.	Structure	ESI-MS	Retention Time (min)
3371	2CF ₃ CO ₂ H	424.2 (M + H)	2.96
3372	3CF ₃ CO ₂ H	427.2 (M + H)	2.53
3373	2CF ₃ CO ₂ H	432.4 (M + H)	3.12
3374	3CF ₃ CO ₂ H	447.4 (M + H)	2.45
3375	2CF ₃ CO ₂ H	408.2 (M + H)	3.02
3376	2CF ₃ CO ₂ H	496.4 (M + H)	2.81

Example No.	Structure	ESI-MS	Retention Time (min)
3377	2CF ₃ CO ₂ H	400.2 (M + H)	2.81
3378	NNN H F 1	520.2 (M + H)	3.14
3379	2CF ₃ CO ₂ H	410.4 (M + H)	3.12
3380	2CF ₃ CO ₂ H	496.4 (M + H)	3.40
3381	2CF ₃ CO ₂ H	496.4 (M + H)	3.17
3382	2CF ₃ CO ₂ H	462.2 (M + H)	3.19

Example No.	Structure	ESI-MS	Retention Time (min)
3383	2CF ₃ CO ₂ H	462.2 (M + H)	3.28
3384	2CF ₃ CO ₂ H	440.4 (M + H)	2.74
3385	2CF ₃ CO ₂ H	454.2 (M + H)	2.89
3386	2CF ₃ CO ₂ H	404.4 (M + H)	3.09
3387	2CF ₃ CO ₂ H	482.2 (M + H)	3.29
3388	3CF ₃ CO ₂ H	458.4 (M + H)	2.99

Example No.	Structure	ESI-MS	Retention Time (min)
3389	2CF ₃ CO ₂ H	452.2 (M + H)	3.40
3390	2CF ₃ CO ₂ H	560.2 (M + H)	3.73
3391	2CF ₃ CO ₂ H	416.4 (M + H)	2.99
3392	2CF ₃ CO ₂ H	518.6 (M+H)	4.08
3393	2CF ₃ CO ₂ H	436.4 (M + H)	2.95
3394	CF ₃ CO ₂ H	434.4 (M + H)	3.30

Example No.	Structure	ESI-MS	Retention Time (min)
3395	CF ₃ CO ₂ H	440.4 (M + H)	4.26
3396	CF ₃ CO ₂ H	458.2 (M + H)	4.39
3397	CF ₃ CO ₂ H	480.4 (M + H)	4.37
3398	CF ₃ CO ₂ H	523.6 (M + H)	4.15
3399	N N N N N N N N N N	404.4 (M + H)	3.46
3400	CF ₃ CO ₂ H	404.4 (M + H)	3.75

Example No.	Structure	ESI-MS	Retention Time (min)
3401	CF ₃ CO ₂ H	382.4 (M + H)	· 3.65
3402	CF ₃ CO ₂ H	420.4 (M + H)	3.81
3403	CF ₃ CO ₂ H	381.2 (M + H)	3.33
3404	CF ₃ CO ₂ H	404.4 (M + H)	3.93
3405	O, N=O N N=O CF₃CO₂H	435.2 (M + H)	3.40
3406	CF ₃ CO ₂ H	484.4 (M + H)	4.15

Example No.	Structure	ESI-MS	Retention Time (min)
3407	CF ₃ CO ₂ H	469.4 (M + H)	4.20
3408	CF ₃ CO ₂ H	436.2 (M + H)	3.88
3409	CF ₃ CO ₂ H	434.4 (M + H)	3.91
3410	CF ₃ CO ₂ H	558.4 (M + H)	4.92
3411	2CF ₃ CO ₂ H	483.4 (M + H)	4.08
3412	CF ₃ CO ₂ H	396.2 (M + H)	3.68

Example No.	Structure	ESI-MS	Retention Time (min)
3413	CF ₃ CO ₂ H	454.2 (M + H)	3.70
3414	CF ₃ CO ₂ H	449.4 (M + H)	4.09
3415	CF ₃ CO ₂ H	476.2 (M + H)	4.33
3416	CF ₃ CO ₂ H	476.4 (M + H)	3.60
3417	F + F $N + N + N + N + N + N + N + N + N + N +$	476.4 (M + H)	4.23
3418	CF ₃ CO ₂ H	476.4 (M + H)	4.38

Example No.	Structure	ESI-MS	Retention Time (min)
3419	CF ₃ CO ₂ H	426.2 (M + H)	3.87
3420	CF ₃ CO ₂ H	444.4 (M + H)	3.86
3421	CF_3CO_2H	462.2 (M + H)	4.15
3422	CI N	424.2 (M + H)	4.06
3423	CF_3CO_2H	450.4 (M + H)	4.03
3424	CF ₃ CO ₂ H	434.2 (M + H)	3.75

Example No.	Structure	ESI-MS	Retention Time (min)
3425	CF ₃ CO ₂ H	426.2 (M + H)	3.88
3426	CF ₃ CO ₂ H	450.4 (M + H)	3.64
3427	CF ₃ CO ₂ H	450.4 (M + H)	3.55
3428	CF ₃ CO ₂ H	418.6 (M + H)	4.17
3429	CF ₃ CO ₂ H	434.4 (M + H)	4.03
3430	CF ₃ CO ₂ H	458.2 (M + H)	4.45

Example No.	Structure	ESI-MS	Retention Time (min)
3431	CF ₃ CO ₂ H	415.4 (M + H)	3.76
3432	CF ₃ CO ₂ H	474.4 (M + H)	5.06
3433	CF ₃ CO ₂ H	410.2 (M + H)	3.64
3434	CF ₃ CO ₂ H	516.2 (M + H)	4.24
3435	CF ₃ CO ₂ H	424.2 (M + H)	4.09
3436	CF ₃ CO ₂ H	458.2 (M + H)	3.89

Example No.	Structure	ESI-MS	Retention Time (min)
3437	CF ₃ CO ₂ H	516.2 (M + H)	3.88
3438	CF ₃ CO ₂ H	460.4 (M + H)	4.86
3439	CF ₃ CO ₂ H	488.4 (M + H)	4.70
3440	CF ₃ CO ₂ H	472.4 (M + H)	4.29
3441	CF ₃ CO ₂ H	426.2 (M + H)	3.69
3442	CF_3CO_2H	480.2 (M + H)	4.16

Example No.	Structure	ESI-MS	Retention Time (min)
3443	CF ₃ CO ₂ H	458.2 (M + H)	3.91
3444	CF ₃ CO ₂ H	450.4 (M + H)	3.95
3445	CF_3CO_2H	444.4 (M + H)	4.01
3446	CF ₃ CO ₂ H	426.2 (M + H)	4.00
3447	CF ₃ CO ₂ H	408.4 (M + H)	3.75
3448	CF ₃ CO ₂ H	446.6 (M + H)	4.65

Example No.	Structure	ESI-MS	Retention Time (min)
3449	CF ₃ CO ₂ H	415.2 (M + H)	3.75
3450	CF ₃ CO ₂ H	420.4 (M + H)	3.91
3451	CF ₃ CO ₂ H	490.4 (M + H)	4.99
3452	CF ₃ CO ₂ H	504.4 (M + H)	5.16
3453	N N N N N N N N N N	444.4 (M + H)	4.00
3454	CF ₃ CO ₂ H	396.2 (M + H)	3.85

Example No.	Structure	ESI-MS	Retention Time (min)
3455	CF ₃ CO ₂ H	526.6 (M + H)	4.69
3456	CF ₃ CO ₂ H	408.4 (M + H)	3.30
3457	CF ₃ CO ₂ H	480.4 (M + H)	3.76
3458	CF_3CO_2H	426.2 (M + H)	3.86
3459	CF ₃ CO ₂ H	424.2 (M + H)	3.76
3460	CF ₃ CO ₂ H	440.4 (M + H)	4.05

Example No.	Structure	ESI-MS	Retention Time (min)
3461	FFF NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	458.4 (M + H)	4.25
3462	CF ₃ CO ₂ H	408.2 (M + H)	3.84
3463	CF ₃ CO ₂ H	458.2 (M + H)	4.25
3464	CF ₃ CO ₂ H	446.6 (M + H)	4.44
3465	CF ₃ CO ₂ H	470.2 (M + H)	4.13
3466	CF ₃ CO ₂ H	476.2 (M + H)	4.25

Example No.	Structure	ESI-MS	Retention Time (min)
3467	N N N N N N N N N N	476.2 (M + H)	3.92
3468	CF ₃ CO ₂ H	526.4 (M + H)	4.31
3469	CF ₃ CO ₂ H	476.2 (M + H)	4.15
3470	CF ₃ CO ₂ H	462.2 (M + H)	4.48
3471	CF ₃ CO ₂ H	466.4 (M + H)	4.45
3472	CF ₃ CO ₂ H	474.4 (M + H)	4.29

Example No.	Structure	ESI-MS	Retention Time (min)
3473	CF ₃ CO ₂ H	486.2 (M + H)	4.32
3474	CF ₃ CO ₂ H	438.4 (M + H)	4.31
3475	2CF ₃ CO ₂ H	441.4 (M + H)	3.75
3476	CF ₃ CO ₂ H	434.4 (M + H)	4.10
3477	CF_3CO_2H	469.4 (M + H)	4.19
3478	CF ₃ CO ₂ H	444.4 (M + H)	4.36

Example No.	Structure	ESI-MS	Retention Time (min)
3479	3CF ₃ CO ₂ H	482.4 (M + H)	4.35
3480	N N H CF ₃ CO ₂ H	482.4 (M + H)	4.64
3481	CF ₃ CO ₂ H	502.2 (M + H)	4.37
3482	CF ₃ CO ₂ H	458.2 (M + H)	4.08
3483	$\begin{array}{c c} & & & & & & \\ & & & & & & \\ N & & & & \\ N & & & & \\$	465.4 (M + H)	3.66
3484	CF_3CO_2H	404.4 (M + H)	4.03

Example No.	Structure	ESI-MS	Retention Time (min)
3485	CF ₃ CO ₂ H	469.4 (M + H)	4.23
3486	2CF ₃ CO ₂ H	447.4 (M + H)	3.94
3487	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	456.2 (M + H)	4.07
3488	CF ₃ CO ₂ H	432.4 (M + H)	3.99
3489	2CF ₃ CO ₂ H	441.3 (M + H)	1.70
3490	N N N N N N N N N N	440.2 (M + H)	4.57

Example No.	Structure	ESI-MS	Retention Time (min)
3491	N N N N N N N N N N N N N N N N N N N	393.4 (M + H)	4.01
3492	2CF ₃ CO ₂ H	497.4 (M + H)	4.45
3493	CF ₃ CO ₂ H	470.2 (M + H)	2.40
3494	$ \begin{array}{c c} N & H & NH_2 \\ N & N & CI \\ N & NH_2 \\ 2CF_3CO_2H \end{array} $	439.4 (M + H)	1.92
3495	$ \begin{array}{c c} N & H & N \\ N & N & O & OH \\ 2CF_3CO_2H \end{array} $	407.4 (M + H)	2.30
3496	$\begin{array}{c c} & CI & NH_2 \\ & N & NH_2 \\ & NH_2 & NH_2 \\ & 2CF_3CO_2H \end{array}$	469.5 (M + H)	2.27

Example No.	Structure	ESI-MS	Retention Time (min)
3497	$ \begin{array}{c c} N & H & H \\ N & N & N \\ N & N & $	439.4 (M + H)	1.93
3498	2CF ₃ CO ₂ H	407.4 (M + H)	1.62
3499	CF ₃ CO ₂ H	416.3 (M + H)	2.34
3500	CF ₃ CO ₂ H	460.4 (M + H)	2.46
3501	N N N N N N N N N N	465.4 (M + H)	4.13
3502	N N H H N O O O O O O O O O O O O O O O	419.4 (M + H)	3.87

Example No.	Structure	ESI-MS	Retention Time (min)
3503	CF ₃ CO ₂ H	450.4 (M + H)	3.97
3504	N N N N N N N N N N	406.2 (M + H)	2.18
3505	CF ₃ CO ₂ H	470.4 (M + H)	4.74
3506	CF_3CO_2H	466.4 (M + H)	3.83
3507	2CF ₃ CO ₂ H	441.2 (M + H)	4.38
3508	2CF ₃ CO ₂ H	441.2 (M + H)	3.62

Example No.	Structure	ESI-MS	Retention Time (min)
3509	CF ₃ CO ₂ H	454.5 (M + H)	2.44
3510	N N H O O O O O O O O O O O O O O O O O	384.4 (M + H)	3.67
3511	N N N N N N N N N N	502.2 (M + H)	4.37
3512	CF ₃ CO ₂ H	480.5 (M + H)	2.18
3513	CF ₃ CO ₂ H	380.2 (M + H)	3.81
3514	N N N N N N N N N N N N N N N N N N N	463.2 (M + H)	4.23

Example No.	Structure	ESI-MS	Retention Time (min)
3515	$2CF_3CO_2H$	443.4 (M + H)	2.12
3516	CF ₃ CO ₂ H	431.1 (M + H)	1.90
3517	CF_3CO_2H	474.4 (M + H)	5.05
3518	$ \begin{array}{c c} & H \\ & N \\$	440.5 (M+H)	2.33
3519	CF ₃ CO ₂ H	464.5 (M + H)	2.20
3520	$ \begin{array}{c c} N & H & N \\ N & N & N \\ N & H & O \end{array} $ $ \begin{array}{c c} 1 & 1 & 1 & 1 \\ 2 & 1$	391.1 (M+H)	1.59

Example No.	Structure	ESI-MS	Retention Time (min)
3521	N N N N N N N N N N	474.4 (M + H)	4.53
3522	CF ₃ CO ₂ H	542.2 (M + H)	2.26
3523	2CF ₃ CO ₂ H	429.3 (M + H)	2.41
3524	CF_3CO_2H	494.6 (M + H)	2.59
3525	CF ₃ CO ₂ H	518.5 (M+H)	2.96
3526	CF ₃ CO ₂ H	420.4 (M + H)	2.19

Example No.	Structure	ESI-MS	Retention Time (min)
3527	CF ₃ CO ₂ H	420.4 (M + H)	2.19
3528	NH Br NNNN SFF 2CF ₃ CO ₂ H	552.0 (M + H)	2.45
3529	NH Br NN N OF F F F	564.2 (M + H)	2.48
3530	NH NH NH NH NH PF F F 2CF ₃ CO ₂ H	606.0 (M + H)	2.86
3531	NH NNNN PFF 2CF ₃ CO ₂ H	586.2 (M+H)	3.20
3532	NH NNN NNN NNN NNN NNN NNN NNN NNN NNN	614.4 (M + H)	2.76

Example No.	Structure	ESI-MS	Retention Time (min)
3533	CI NH NH NH OFF FF	620.0 (M + H)	2.68
3534	NH NN NN NN NN NN NN NN NN NN NN NN NN N	616.0 (M + H)	2.56
3535	PFF Br N N N H 2CF ₃ CO ₂ H	566.0 (M + H)	2.54
3536	CF ₃ CO ₂ H	532.2 (M + H)	3.35
3537	2CF ₃ CO ₂ H	541.4 (M + H)	3.11
3538	CF ₃ CO ₂ H	505.2 (M + H)	2.98

Example No.	Structure	ESI-MS	Retention Time (min)
3539	CF ₃ CO ₂ H	556 (M+H)	3.37
3540	CF ₃ CO ₂ H	516.4 (M + H)	3.39
3541	CF₃CO₂H	504.4 (M + H)	3.61
3542	CF ₃ CO ₂ H	574.4 (M + H)	4.27
3543	CF ₃ CO ₂ H	508.2 (M + H)	3.17
3544	CF ₃ CO ₂ H	644.2 (M + H)	3.63

Example No.	Structure	ESI-MS	Retention Time (min)
3545	CF ₃ CO ₂ H	520.4 (M + H)	3.56
3546	N N N S O F F F CF ₃ CO ₂ H	504.2 (M + H)	3.25
3547	2CF ₃ CO ₂ H	513.4 (M + H)	2.86
3548	CF ₃ CO ₂ H	616.2 (M + H)	3.73
3549	$2CF_3CO_2H$	450.4 (M + H)	2.79
3550	CF ₃ CO ₂ H	466.2 (M + H)	3.35

Example No.	Structure	ESI-MS	Retention Time (min)
3551	2CF ₃ CO ₂ H	465.2 (M + H)	3.34
3552	CF ₃ CO ₂ H	451.2 (M + H)	3.83
3553	CF ₃ CO ₂ H	451.2 (M + H)	4.10
3554	CF ₃ CO ₂ H	563.2 (M + H)	4.33
3555	2CF ₃ CO ₂ H	468.4 (M + H)	3.66
3556	2CF ₃ CO ₂ H	467.4 (M + H)	2.85

Example No.	Structure	ESI-MS	Retention Time (min)
3557	CF ₃ CO ₂ H	515.4 (M + H)	3.52
3558	CF ₃ CO ₂ H	485.2 (M + H)	3.40
3559	2CF ₃ CO ₂ H	467.4 (M + H)	3.90
3560	CF ₃ CO ₂ H	473.4 (M + H)	4.17
3561	CF ₃ CO ₂ H	467.4 (M + H)	3.57
3562	CF ₃ CO ₂ H	490.2 (M + H)	4.00

Example No.	Structure	ESI-MS	Retention Time (min)
3563	CF ₃ CO ₂ H	490.2 (M + H)	3.99
3564	2CF ₃ CO ₂ H	476.2 (M + H)	3.76
3565	CF ₃ CO ₂ H	467.2 (M + H)	4.07
3566	CF_3CO_2H	528.2 (M + H)	4.53
3567	CF ₃ CO ₂ H	464.2 (M + H)	4.11
3568	CF ₃ CO ₂ H	494.0 (M + H)	3.43

Example No.	Structure	ESI-MS	Retention Time (min)
3569	CF ₃ CO ₂ H	444.0 (M + H)	3.03
3570	CF ₃ CO ₂ H	552.0 (M + H)	3.30
3571	CF ₃ CO ₂ H	510.0 (M + H)	3.37
3572	CF ₃ CO ₂ H	562.0 (M + H)	3.66
3573	CF ₃ CO ₂ H	622.0 (M + H)	3.61
3574	CF ₃ CO ₂ H	588.0 (M + H)	3.59

Example No.	Structure	ESI-MS	Retention Time (min)
3575	CF ₃ CO ₂ H	510.0 (M + H)	3.31
3576	CF ₃ CO ₂ H	562.0 (M + H)	3.61
3577	CF ₃ CO ₂ H	510.0 (M + H)	3.35
3578	CF ₃ CO ₂ H	597.0 (M + H)	3.55
3579	CF ₃ CO ₂ H	665.0 (M + H)	4.02

Assay Procedures

Compounds identified and disclosed throughout this patent document were assayed according to the protocols found in co-pending patent application having U.S. Serial Number 09/826,509, which is incorporated herein by reference.

Example 3580

Preparation of Endogenous MCH Receptor.

The endogenous human MCH receptor was obtained by PCR using genomic DNA as template and rTth polymerase (Perkin Elmer) with the buffer system provided by the manufacturer, 0.25 µM of each primer, and 0.2 mM of each 4 nucleotides. The cycle condition was 30 cycles of 94°C for 1 min, 56°C for 1 min and 72 °C for 1 min and 20 sec. The 5' PCR primer contained a HindIII site with the sequence:

5'-GTGAAGCTTGCCTCTGGTGCCTGCAGGAGG-3' (SEQ.ID.NO.:1)

and the 3' primer contained an EcoRI site with the sequence:

5'-GCAGAATTCCCGGTGGCGTGTTGTGGTGCCC-3' (SEQ.ID.NO.:2).

The 1.3 kb PCR fragment was digested with HindIII and EcoRI and cloned into HindIII-EcoRI site of CMVp expression vector. Later the cloning work by Lakaye et al showed that there is an intron the coding rgion of the gene. Thus the 5' end of the cDNA was obtained by 5' RACE PCR using Clontech's marathon-ready hypothalamus cDNA as template and the manufacturer's recommended protocol for cycling condition. The 5' RACE PCR for the first and second round PCR were as follows:

5'-CATGAGCTGGTGGATCATGAAGGG-3' (SEQ.ID.NO.:3) and

5'-ATGAAGGCCATGCCCAGGAGAAAG-3' (SEQ.ID.NO.:4).

Nucleic acid and amino acid sequences were thereafter determined and verified with the published sequences found on GenBank having Accession Number U71092.

Example 3581

Preparation of Non-Endogenous, Constitutively Active MCH Receptor.

Preparation of a non-endogenous version of the human MCH receptor was accomplished by creating a MCH-IC3-SST2 mutation (see; SEQ.ID.NO.:7 for nucleic acid sequence, and SEQ.ID.NO.:8 for amino acid sequence). Blast result showed that MCH receptor had the highest sequence homology to known SST2 receptor. Thus the third intracellular loop ("IC3") of MCH receptor was replaced with that of the IC3 of SST2

receptor to see if the chimera would show constitutive activity.

The BamHI-BstEII fragment containing IC3 of MCH receptor was replaced with synthetic oligonucleotides that contained the IC3 of SST2. The PCR sense mutagenesis primer used had the following sequence:

5'-GATCCTGCAGAAGGTGAAGTCCTCTGGAATCCGAGTGGGCTCCTCTAAGAG GAAGAAGTCTGAGAAGAAG-3' (SEQ.ID.NO.:9)

and the antisense primer had the following sequence:

5'-GTGACCTTCTCAGACTTCTTCCTCTTAGAGGAGCCCACTCGGATTCCAG AGGACTTCACCTTCTGCAG-3' (SEQ.ID.NO.:10).

The endogenous MCH receptor cDNA was used as a template.

Example 3582

GPCR Fusion Protein Preparation.

MCH Receptor-Gia Fusion Protein construct was made as follows: primers were designed for endogenous MCH receptor was as follows:

5'-GTGAAGCTTGCCCGGGCAGGATGGACCTGG-3' (SEQ.ID.NO.:11; sense)

5'-ATCTAGAGGTGCCTTTGCTTTCTG-3' (SEQ.ID.NO.:12; anitsense).

The sense and anti-sense primers included the restriction sites for KB4 and XbaI, respectively.

PCR was utilized to secure the respective receptor sequences for fusion within the Giα universal vector disclosed above, using the following protocol for each: 100ng cDNA for MCH receptor was added to separate tubes containing 2ul of each primer (sense and anti-sense), 3uL of 10mM dNTPs, 10uL of 10XTaqPlusTM Precision buffer, 1uL of TaqPlusTM Precision polymerase (Stratagene: #600211), and 80uL of water. Reaction temperatures and cycle times for MCH receptor were as follows: the initial denaturing step was done it 94°C for five minutes, and a cycle of 94°C for 30 seconds; 55°C for 30 seconds; 72°C for two minutes. A final extension time was done at 72°C for ten minutes. PCR product for was run on a 1% agarose gel and then purified (data not shown). The purified product was digested with KB4 and XbaI (New England Biolabs) and the desired inserts will be isolated, purified and ligated into the Gi universal vector at the respective restriction site. The positive clones was isolated following transformation and determined by restriction enzyme digest; expression using 293 cells was accomplished

following the protocol set forth *infra*. Each positive clone for MCH receptor: Gi-Fusion Protein was sequenced and made available for the direct identification of candidate compounds. (See, SEQ.ID.NO.:13 for nucleic acid sequence and SEQ.ID.NO.:14 for amino acid sequence).

Endogenous version of MCH receptor was fused upstream from the G protein Gi and is located at nucleotide 1 through 1,059 (see, SEE.ID.NO.:13) and amino acid residue 1 through 353 (see, SEQ.ID.NO.:14). With respect to the MCH receptor, 2 amino acid residues (an equivalent of 6 nucleotides) were placed in between the endogenous (or non-endogenous) GPCR and the start codon for the G protein Giα. Therefore, the Gi protein is located at nucleotide 1,066 through 2,133 (see, SEQ.ID.NO.:13) and at amino acid residue 356 through 711 (see, SEQ.ID.NO.:14). Those skilled in the art are credited with the ability to select techniques for constructing a GPCR Fusion Protein where the G protein is fused to the 3' end of the GPCR of interest.

Example 3583

ASSAY FOR DETERMINATION OF CONSTITUTIVE ACTIVITY OF NON-ENDOGENOUS GPCRS

A. Intracellular IP, Accumulation Assay

On day 1, cells comprising the receptors (endogenous and/or non-endogenous) can be plated onto 24 well plates, usually 1×10^5 cells/well (although his umber can be optimized. On day 2 cells can be transfected by firstly mixing 0.25ug DNA in 50 ul serum free DMEM/well and 2 ul lipofectamine in 50 µl serum-free DMEM/well. The solutions are gently mixed and incubated for 15-30 min at room temperature. Cells are washed with 0.5 ml PBS and 400 µl of serum free media is mixed with the transfection media and added to the cells. The cells are then incubated for 3-4 hrs at 37° C/5%CO₂ and then the transfection media is removed and replaced with 1ml/well of regular growth media. On day 3 the cells are labeled with 3 H-myo-inositol. Briefly, the media is removed and the cells are washed with 0.5 ml PBS. Then 0.5 ml inositol-free/serum free media (GIBCO BRL) is added/well with 0.25 µCi of 3 H-myo-inositol/ well and the cells are incubated for 16-18 hrs o/n at 37° C/5%CO₂. On Day 4 the cells are washed with 0.5 ml PBS and 0.45 ml of assay medium is added containing inositol-free/serum free media 10µM pargyline 10 mM lithium chloride or 0.4 ml of assay medium and 50 ul of 10x

ketanserin (ket) to final concentration of 10μM. The cells are then incubated for 30 min at 37°C. The cells are then washed with 0.5 ml PBS and 200 ul of fresh/ice cold stop solution (1M KOH; 18 mM Na-borate; 3.8 mM EDTA) is added/well. The solution is kept on ice for 5-10 min or until cells were lysed and then neutralized by 200 μl of fresh/ice cold neutralization sol. (7.5 % HCL). The lysate is then transferred into 1.5 ml eppendorf tubes and 1 ml of chloroform/methanol (1:2) is added/tube. The solution is vortexed for 15 sec and the upper phase is applied to a Biorad AG1-X8TM anion exchange resin (100-200 mesh). Firstly, the resin is washed with water at 1:1.25 W/V and 0.9 ml of upper phase is loaded onto the column. The column is washed with 10 mls of 5 mM myo-inositol and 10 ml of 5 mM Na-borate/60mM Na-formate. The inositol tris phosphates are eluted into scintillation vials containing 10 ml of scintillation cocktail with 2 ml of 0.1 M formic acid/1 M ammonium formate. The columns are regenerated by washing with 10 ml of 0.1 M formic acid/3M ammonium formate and rinsed twice with H₂O and stored at 4°C in water.

Reference is made to Figure 1. Figure 1 provides an illustration of IP₃ production from several non-endogenous, constitutively activated version of MCH receptor as compared with the endogenous version of this receptor. When compared to the endogenous version of MCH receptor ("MCH-R wt"), MCH-IC3-SST2 evidenced about a 27% increase in IP₃ accumulation.

Example 3584

Determination of Compound Using [35S]GTPγS ASSAY

Direct identification of candidate compounds was initially screened using [35S]GTPγS Assay (see, Example 6 of co-pending patent application 09/826,509). Preferably, an MCH receptor: Gi Fusion Protein was utilized, according to Example 6(2) of co-pending patent application 09/826,509. Several lead hits were identified utilizing [35S]GTPγS Assay.

Example 3585

High Throughput Functional Screening: FLIPR™

Subsequently, a functional based assay was used to confirm the lead hits, referred to as FLIPR™ (the Fluorometric Imaging Plate Reader) and FDSS6000™ (Functional

Drug Screening System). This assay utilized a non-endogenous version of the MCH receptor, which was created by swapping the third intracellular loop of the MCH receptor with that of the SST2 receptor (see Example 2(B)(2) of patent application serial number 09/826,509).

The FLIPR and FDSS assays are able to detect intracellular Ca²+ concentration in cells, which can be utilized to assess receptor activation and determine whether a candidate compound is an, for example, antagonist, inverse agonist or agonist to a Gq-coupled receptor. The concentration of free Ca²+ in the cytosol of any cell is extremely low, whereas its concentration in the extracellular fluid and endoplasmic reticulum (ER) is very high. Thus, there is a large gradient tending to drive Ca²+ into the cytosol across both the plasma membrane and ER. The FLIPR™ and FDSS6000™ systems (Molecular Devices Corporation, HAMAMATSU Photonics K.K.) are designed to perform functional cell-based assays, such as the measurement of intracellular calcium for high-throughput screening. The measurement of fluorescent is associated with calcium release upon activation of the Gq-coupled receptors. Gi or Go coupled receptors are not as easily monitored through the FLIPR™ and FDSS6000™ systems because these G proteins do not couple with calcium signal pathways.

To confirm the lead hits identified using the [35S]GTPγS assay, Fluorometric Imaging Plate Reader system was used to allow for rapid, kinetic measurements of intracellular fluorescence in 96 well microplates (or 384 well microplates). Simultaneous measurements of fluorescence in all wells can be made by FLIPR or FDSS6000TM every second with high sensitivity and precision. These systems are ideal for measuring cell-based functional assays such as monitoring the intracellular calcium fluxes that occur within seconds after activation of the Gq coupled receptor.

Briefly, the cells are seeded into 96 well at 5.5x10⁴ cells/well with complete culture media (Dulbecco's Modified Eagle Medium with 10 % fetal bovine serum, 2 mM L-glutamine, 1 mM sodium pyruvate and 0.5 mg/ml G418, pH 7.4) for the assay next day. On the day of assay, the media is removed and the cells are incubated with 100 μl of loading buffer (4 μM Fluo4-AM in complete culture media containing 2.5 mM Probenicid, 0.5 mg/ml and 0.2% bovine serum albumin) in 5% CO₂ incubator at 37°C for 1 hr. The loading buffer is removed, and the cells are washed with wash buffer (Hank's Balanced Salt Solution containing 2.5 mM Probenicid, 20 mM HEPES, 0.5 mg/ml and 0.2% bovine

serum albumin, pH 7.4)). One hundred fifty µl of wash buffer containing various concentrations of test compound are added to the cells, and the cells are incubated in 5% CO₂ incubator at 37°C for 30 min. Fifty µl of wash buffer containing various concentration of MCH are added to each well, and transient changes in [Ca²⁺]i evoked by MCH are monitored using the FLIPR or FDSS in 96 well plates at Ex. 488 nm and Em. 530 nm for 290 second. When antagonist activity of compound is tested, 50 nM of MCH is used.

Use of FLIPR™ and FDSS6000™ can be accomplished by following manufacturer's instruction (Molecular Device Corporation and HAMAMATSU Photonics K.K.).

The results were shpwn below.

Compound No.	IC ₅₀ value (nM)
Example 41	6
Example 42	19

It is intended that each of the patents, applications, printed publications, and other published documents mentioned or referred to in this specification be herein incorporated by reference in their entirety.

Those skilled in the art will appreciate that numerous changes and modifications may be made to the preferred embodiments of the invention and that such changes and modifications may be made without departing from the spirit of the invention. It is therefore intended that the appended claims cover all such equivalent variations as fall within the true spirit and scope of the invention.

What is claimed is:

1. A compound of Formula I:

$$Q_LY_R_1$$

wherein Q is

R₁ represents

(i) C_1 - C_{16} alkyl,

C₁-C₁₆ alkyl substituted by substituent(s) independently selected from

- •halogen,
- •hydroxy,
- •oxo,
- •C₁-C₃ alkoxy,
- •C₁-C₃ alkoxy substituted by substituent(s) independently selected from
- ••carbocyclic aryl,
- ••heterocyclyl,
- ••heterocyclyl substituted by C₁-C₃ alkyl,
- •C₁-C₃ alkylcarbonyloxy,
- ·carbocyclyloxy,
- ·carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- ··carbocyclic aryl,
- ••carbocyclic aryl substituted by C₁-C₃ alkoxy,

- ••C₁-C₄ alkyl,
- ••C₁-C₄ alkyl substituted by substituent(s) independently selected from
- •••OXO,
- •••mono- or di-C₁-C₃ alkylamino.
- •••mono- or di-C₁-C₃ alkylamino substituted by carbocyclic aryl,
- •••mono- or di-C₁-C₃ alkylamino substituted by halogenated carbocyclic aryl,
- •••carbocyclic arylcarbonylamino,
- •••halogenated carbocyclic arylcarbonylamino,
- •heterocyclyloxy,
- •heterocyclyloxy substituted by C₁-C₃ alkyl,
- •substituted heterocyclyl-ethylideneaminooxy,
- •C₁-C₃ alkoxycarbonyl,
- •C₁-C₃ alkoxycarbonyl substituted by carbocyclic aryl,
- •mono- or di-C₁-C₃ alkylaminocarbonyl,
- •mono- or di-C₁-C₃ alkylamino,
- •mono- or di-C₁-C₃ alkylamino substituted by substituent(s) independently selected from
- ••cyano,
- ··carbocyclic aryl,
- ••heterocyclyl,
- •mono- or di-carbocyclic arylamino,
- •mono- or di-carbocyclic arylamino substituted by substituent(s) independently selected from
- ••hydroxy,
- ••C₁-C₃ alkyl,
- •C₁-C₃ alkylcalbonylamino,
- •C₁-C₃ alkylcalbonylamino substituted by substituent(s) independently selected from
- ••C₁-C₃ alkylcalbonylamino,
- ••carbocyclic arylcalbonylamino,
- ••heterocyclyl,
- •C₁-C₄ alkoxycalbonylamino,
- •heterocyclyl calbonylamino,
- ·carbocyclic arylsulfonylamino,

•carbocyclic arylsulfonylamino substituted by substituent(s) independently selected from

- ••nitro,
- ••C₁-C₃ alkyl,
- ••mono- or di-C₁-C₃ alkylamino,
- •C₁-C₃ alkylthio,
- •C₁-C₃ alkylthio substituted by substituent(s) independently selected from
- ••mono- or di-carbocyclic arylaminocarbonyl,
- halogenated mono- or di-carbocyclic arylaminocarbonyl,
- ••mono- or di-carbocyclic arylamino,
- ••halogenated mono- or di-carbocyclic arylamino,
- ••carbocyclic aryl,
- ••carbocyclic aryl substituted by substituent(s) independently selected from
- •••halogen,
- ••• C_1 - C_3 alkoxy,
- ·carbocyclic arylthio,
- •carbocyclic arylthio substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- •carbocyclic arylsulfonyl,
- •halogenated carbocyclic arylsulfonyl,
- •heterocyclylthio,
- •heterocyclylthio substituted by substituent(s) independently selected from
- ••nitro,
- ••C₁-C₃ alkyl,
- •C₃-C₆ cycloalkyl,
- •C₃-C₆ cycloalkyl substituted by C₁-C₃ alkyl,
- •C₃-C₆ cycloalkenyl,
- ·carbocyclyl,
- •carbocyclyl substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- ••C₁-C₃ alkoxy,

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••C<sub>2</sub>-C<sub>3</sub> alkenyl,
 ••C<sub>2</sub>-C<sub>3</sub> alkenyl substituted by carbocyclic aryl,
••C<sub>2</sub>-C<sub>3</sub> alkenyl substituted by carbocyclic aryl substituted C<sub>1</sub>-C<sub>3</sub> alkylsulfinyl,
 ·carbocyclic aryl,
•carbocyclic aryl substituted by substituent(s) independently selected from
••halogen,
••hydroxy,
••nitro,
••C<sub>1</sub>-C<sub>4</sub> alkyl,
••C<sub>1</sub>-C<sub>4</sub> alkyl substituted by substituent(s) independently selected from
•••halogen,
•••hydroxy,
•••oxo,
•••carbocyclic aryl,
•••heterocyclyl,
•••mono- or di-carbocyclic arylamino,
•••mono- or di-carbocyclic arylamino substituted by substituent(s) independently selected
from
••••halogen,
••••nitro.
••••C<sub>1</sub>-C<sub>3</sub> alkyl,
••••C<sub>1</sub>-C<sub>3</sub> alkoxy,
••••halogenated C<sub>1</sub>-C<sub>3</sub> alkoxy,
••C<sub>1</sub>-C<sub>4</sub> alkoxy,
••C<sub>1</sub>-C<sub>4</sub> alkoxy substituted by substituent(s) independently selected from
•••halogen,
•••carbocyclic aryl,
••carbocyclic aryloxy,
••C<sub>1</sub>-C<sub>3</sub> alkoxycarbonyl,
••C<sub>1</sub>-C<sub>3</sub> alkylcarbonyloxy,
••mono- or di-C<sub>1</sub>-C<sub>3</sub> alkylamino,
••mono- or di-carbocyclic arylamino.
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••halogenated mono- or di-carbocyclic arylamino,
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- ••mono- or di-carbocyclic arylaminocarbonyl,
- ••mono- or di-carbocyclic arylaminocarbonyl substituted by substituent(s) independently selected from
- •••halogen,
- •••nitro,
- •••C₁-C₃ alkyl,
- •••C₁-C₃ alkoxy,
- •••halogenated C₁-C₃ alkoxy,
- ••mercapto,
- ••C₁-C₃ alkylthio,
- ••halogenated C₁-C₃ alkylthio,
- ••C₁-C₃ alkylsulfonyl,
- ••C₃-C₆ cycloalkyl,
- ••carbocyclic aryl,
- ••heterocyclyl,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••hydroxy,
- •• C_1 - C_3 alkyl,
- ••C₁-C₃ alkyl substituted by carbocyclic aryl,
- ••C₁-C₃ alkoxy,
- ••C₁-C₃ alkoxy substituted by carbocyclic aryl,
- ••carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- (ii) C₂-C₈ alkenyl,
- C2-C8 alkenyl substituted by substituent(s) independently selected from
- ·halogen,
- ·oxo,
- •C₁-C₃ alkoxy,
- •C₁-C₃ alkoxy substituted by carbocyclic aryl,
- •carbocyclic aryl,

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•carbocyclic aryl substituted by substituent(s) independently selected from
```

- ••halogen,
- ••hydroxy,
- ••nitro,
- ••C₁-C₃ alkyl,
- ••halogenated C₁-C₃ alkyl,
- ••C₁-C₃ alkoxy,
- ••halogenated C₁-C₃ alkoxy,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••hydroxy,
- ••nitro,
- ••C₁-C₃ alkyl,
- ••C₁-C₃ alkoxy,
- (iii) C₂-C₄ alkynyl,
- C2-C4 alkynyl substituted by carbocyclic aryl,
- (iv) C₃-C₆ cycloalkyl,
- C₃-C₆ cycloalkyl substituted by substituent(s) independently selected from
- •C₁-C₃ alkyl,
- •C₁-C₃ alkyl substituted by substituent(s) independently selected from
- ••hydroxy,
- ••oxo,
- ••carbocyclic aryl,
- •mono- or di-C₁-C₃ alkylamino,
- •mono- or di-C₁-C₃ alkylamino substituted by carbocyclic aryl,
- •carbocyclic arylcarbonylamino,
- •carbocyclic aryl,
- (v) C₃-C₆ cycloalkeyl,
- C₃-C₆ cycloalkeyl substituted by C₁-C₃ alkyl,
- (vi) carbocyclyl,
- carbocyclyl substituted by substituent(s) independently selected from
- hydroxy,

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nitro,
(vii) carbocyclic aryl,
carbocyclic aryl substituted by substituent(s) independently selected from
•halogen,
hydroxy,
•cyano,
•nitro,
•C<sub>1</sub>-C<sub>9</sub> alkyl,
•C<sub>1</sub>-C<sub>9</sub> alkyl substituted by substituent(s) independently selected from
••halogen,
••hydroxy,
••oxo,
••C<sub>1</sub>-C<sub>3</sub> alkoxy,
••carbocyclic aryloxy,
••mono- or di-C<sub>1</sub>-C<sub>3</sub> alkylamino-N-oxy,
••mono- or di-C<sub>1</sub>-C<sub>3</sub> alkylamino,
••mono- or di-C<sub>1</sub>-C<sub>3</sub> alkylamino substituted by carbocyclic aryl,
••mono- or di-carbocyclic arylamino,
••carbocyclylimino,
••carbocyclylimino substituted by carbocyclic aryl,
••mono- or di-carbocyclic arylamino,
••mono- or di-carbocyclic arylamino substituted by C<sub>1</sub>-C<sub>3</sub> alkoxy,
••mono- or di-carbocyclic arylaminocarbonyl,
••mono- or di-carbocyclic arylaminocarbonyl substituted by C<sub>1</sub>-C<sub>3</sub> alkoxy,
••carbocyclic aryl,
••carbocyclic aryl substituted by substituent(s) independently selected from
•••halogen,
•••C<sub>1</sub>-C<sub>3</sub> alkyl,
•••halogenated C1-C3 alkyl,
••heterocyclyl,
••heterocyclyl substituted by C<sub>1</sub>-C<sub>3</sub> alkyl,
•C<sub>2</sub>-C<sub>3</sub> alkenyl,
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•C<sub>2</sub>-C<sub>3</sub> alkenyl substituted by carbocyclic aryl,
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- •C₁-C₉ alkoxy,
- •C₁-C₉ alkoxy substituted by substituent(s) independently selected from
- ••hydroxy,
- ••halogen,
- ••carboxy,
- ••mono- or di-C₁-C₃ alkylamino,
- ••carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- ••heterocyclyl,
- ••heterocyclyl substituted by substituent(s) independently selected from
- •••halogen,
- •••heterocyclyl,
- •••heterocyclyl substituted by substituent(s) independently selected from
- ••••halogen,
- •••• C_1 - C_3 alkyl,
- ••••halogenated C₁-C₃ alkyl,
- •C₂-C₃ alkenyloxy,
- •C₁-C₃ alkylcarbonyloxy,
- carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- $\cdot \cdot C_1 C_4$ alkyl,
- ••halogenated C₁-C₄ alkyl,
- ••C₁-C₃ alkoxy,
- •heterocyclyloxy,
- •heterocyclyloxy substituted by substituent(s) independently selected from
- ••halogen,
- •• C_1 - C_3 alkyl,
- ••halogenated C1-C3 alkyl,
- •(carbocyclic aryl)S(O)₂O,

```
carboxy,
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- •C₁-C₃ alkoxycarbonyl,
- •mono- or di-C₁-C₃ alkylaminocarbonyl,
- •mono- or di-C₁-C₃ alkylaminocarbonyl substituted by carbocyclic aryl,
- •mono- or di-carbocyclic arylaminocarbonyl,
- •mono- or di-carbocyclic arylaminocarbonyl substituted by C₁-C₃ alkyl,
- •amino,
- •mono- or di-C₁-C₄ alkylamino,
- •mono- or di-C₁-C₄ alkylamino substituted by cyano,
- •mono- or di-carbocyclic arylamino,
- •C₁-C₃ alkynylcarbonylamino,
- •C₁-C₃ alkynylcarbonylamino substituted by carbocyclic aryl,
- •carbocyclic arylsulfonylamino,
- •carbocyclic arylsulfonylamino substituted by C₁-C₃ alkyl,
- •(carbocyclic aryl)NHC(O)NH,
- •(carbocyclic aryl)NHC(O)NH substituted by C₁-C₃ alkoxy,
- •(carbocyclic aryl)NHC(O)NH substituted by haloganated C₁-C₃ alkoxy,
- •carbocyclic aryl diazo.
- •carbocyclic aryl diazo substituted by mono- or di- C₁-C₃ alkylamino,
- •C₁-C₃ alkylthio,
- •halogenated C₁-C₃ alkylthio,
- ·carbocyclic arylthio,
- •carbocyclic arylthio substituted by substituent(s) independently selected from
- ••halogen,
- ••cyano,
- ••C₁-C₃ alkyl,
- •heterocyclylthio,
- •C₁-C₃ alkylsulfonyl,
- •mono- or di-C₁-C₃ alkylaminosulfonyl,
- ·carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from
- ••C₁-C₇ alkyl,

```
••halogenated C<sub>1</sub>-C<sub>7</sub> alkyl,
•heterocyclyl,
•heterocyclyl substituted by substituent(s) independently selected from
••C<sub>1</sub>-C<sub>3</sub> alkyl,
••carbocyclic aryl,
••halogenated carbocyclic aryl,
```

(viii) heterocyclyl,

or heterocyclyl substituted by substituent(s) independently selected from

- •halogen,
- •hydroxy,
- •cyano,
- •nitro,
- •C₁-C₄ alkyl,
- •C₁-C₄ alkyl substituted by substituent(s) independently selected from
- ••halogen,
- ••hydroxy,
- ••oxo,
- ••C₁-C₃ alkylcarbonyloxy,
- ••carbocyclic arylcarbonylamino,
- ••halogenated carbocyclic arylcarbonylamino,
- ••C₁-C₃ alkoxycarbonyl,
- ••C₁-C₃ alkylthio,
- ••C₁-C₃ alkylthio substituted by carbocyclic aryl,
- ••C₁-C₃ alkylthio substituted by halogenated carbocyclic aryl,
- ··carbocyclic aryl,
- ••carbocyclic aryl substituted by substituent(s) independently selected from
- •••halogen,
- •••nitro,
- ••heterocyclyl,
- ••heterocyclyl substituted by substituent(s) independently selected from
- •••halogen,
- •••C₁-C₃ alkyl,

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•••halogenated C<sub>1</sub>-C<sub>3</sub> alkyl,
```

- •C₁-C₃ alkoxy,
- •C₁-C₃ alkoxy substituted by carbocyclic aryl,
- •carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- •mono- or di-C₁-C₃ alkylamino,
- •C₁-C₄ alkylcarbonylamino,
- •C₁-C₃ alkylthio,
- •C₁-C₃ alkenylthio,
- •carbocyclic arylthio,
- •halogenated carbocyclic arylthio,
- •carbocyclic arylthio substituted by C₁-C₃ alkoxycarbonyl,
- •heterocyclylthio,
- •heterocyclylthio substituted by C₁-C₃ alkyl,
- •C₁-C₃ alkylsulfonyl,
- •carbocyclic arylsulfonyl,
- •halogenated carbocyclic arylsulfonyl,
- •carbocyclic arylsulfonyl substituted by C₁-C₄ alkyl,
- •C₁-C₃ alkoxycarbonyl,
- •carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- ••C₁-C₃ alkyl,
- ••halogenated C₁-C₃ alkyl,
- ••C₁-C₃ alkoxy,
- ••halogenated C₁-C₃ alkoxy,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••halogen,

- ••C₁-C₃ alkyl,
- ••halogenated C₁-C₃ alkyl,
- ••C₁-C₃ alkoxy,
- ••C₁-C₃ alkoxycarbonyl;

 R_2 is -NHNH₂, -NHNHBoc, -N(R_{2a})(R_{2b}), morpholino, 4-acetyl-piperazyl, or 4-phenyl-piperazyl;

wherein R_{2a} is H or C₁-C₃ alkyl;

 R_{2b} is C_1 - C_4 alkyl, C_1 - C_4 alkyl substituted by substituent(s) independently selected from •hydroxy,

- •C₁-C₃ alkoxy,
- •amino,
- •-NHBoc,
- •C₃-C₆ cycloalkyl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- •• C_1 - C_3 alkoxy,
- ••-SO₂NH₂,
- •heterocyclyl,

C₃-C₆ cycloalkyl, carbocyclic aryl, carbocyclic aryl substituted by substituent(s) independently selected from

- ·halogen,
- •C₁-C₃ alkyl,
- •C₁-C₃ alkoxy,

or a group of Formula IV;

$$N-R_3$$
 IV

wherein Boc is carbamic acid tert-butyl ester and R3 is C1-C3 alkyl or C1-C3 alkyl

substituted by substituent(s) independently selected from

- ·carbocyclic aryl,
- •halogenated carbocyclic aryl,
- •carbocyclic aryl substituted by C₁-C₃ alkoxy;

L is selected from Formula V - XIX;

wherein R₄ is H or C₁-C₃ alkyl;

 R_5 is H, C_1 - C_3 alkyl, or C_1 - C_3 alkyl substituted by a substituted carbocyclic aryl; Y is -S(O)₂-, -C(O)-, or -(CH₂)_m;

m is 0 or 1;

wherein carbocyclic aryl is phenyl, naphthyl, anthranyl, biphenyl, or phenanthryl; carbocyclyl is 10,11-dihydro-5-oxo-dibenzo[a,d]cycloheptyl, 1-oxo-indanyl, 7,7-dimethyl-2-oxo-bicyclo[2.2.1]heptyl, 9H-fluorenyl, 9-oxo-fluorenyl, acenaphthyl, anthraquinonyl, C-fluoren-9-ylidene, indanyl, indenyl, 1,2,3,4-tetrahydro-naphthyl, or bicyclo[2.2.1]hepteny;

heterocyclyl is 1,2,3,4-tetrahydro-isoquinolyl, 1,2,3-thiadiazolyl, 1,2,3-triazolyl, 1,2-dihydro-3-oxo-pyrazolyl, 1,3,4-thiadiazolyl, 1,3-dioxo-isoindolyl, 1,3-dioxolanyl, 1*H*-indolyl, 1*H*-pyrrolo[2,3-c]pyridyl, 1*H*-pyrrolyl, 1-oxo-3*H*-isobenzofuranyl, 2,2',5',2"-terthiophenyl, 2,2'-bithiophenyl, 2,3-dihydro-1-oxo-isoindolyl, 2,3-dihydro-benzo[1,4]dioxinyl, 2,4-dihydro-3-oxo-pyrazolyl, 2*H*-benzopyranyl, 2-oxo-benzopyranyl, 2-oxo-benzopyranyl, 2-oxo-pyrrolidinyl, 3,4-dihydro-2*H*-benzo[1,4]oxazinyl, 3,4-dihydro-2*H*-benzo[b][1,4]dioxepinyl, 4*H*-benzo[1,3]dioxinyl, 4*H*-benzopyranyl, 4-oxo-1,5,6,7-tetrahydro-indolyl, 4-oxo-3,4-dihydro-phthalazinyl, 4-oxo-benzopyranyl, 9,10,10-trioxo-thioxanthenyl, 9*H*-carbazolyl, 9*H*-xanthenyl, azetidinyl, benzimidazolyl, benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl, benzo[b]thienyl, benzofuryl, benzothiazolyl, cinnolyl, furyl, imidazo[2,1-b]thiazolyl, imidazolyl, isoxazolyl, morpholino, morpholinyl, oxazolyl, oxolanyl, piperazyl, piperidyl, piridyl, pyrazolo[5,1-b]thiazolyl, thiolanyl, 2,3-pyrimidyl, pyrrolidyl, quinolyl, quinoxalyl, thiazolidyl, thiazolyl, thienyl, thiolanyl, 2,3-

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dihydro-benzofuryl, tetrahydro-thienyl, or benzofuranyl;
         halogen is fluoro, chloro, bromo, or iodo;
         or a salt thereof.
         2. A compound according to claim 1, wherein Q is Fomura II;
         R<sub>1</sub> represents
(i) C_1-C_{10} alkyl,
C<sub>1</sub>-C<sub>10</sub> alkyl substituted by substituent(s) independently selected from
•halogen,
•oxo,
•C<sub>1</sub>-C<sub>3</sub> alkoxy,
•C<sub>1</sub>-C<sub>3</sub> alkoxy substituted by carbocyclic aryl,
•C<sub>1</sub>-C<sub>3</sub> alkylcarbonyloxy,
·carbocyclyloxy,

    carbocyclic aryloxy,

•carbocyclic aryloxy substituted by substituent(s) independently selected from
••halogen,
••nitro,
••C<sub>1</sub>-C<sub>4</sub> alkyl,
••C<sub>1</sub>-C<sub>4</sub> alkyl substituted by substituent(s) independently selected from
•••OXO,
•••carbocyclic arylcarbonylamino,
•••halogenated carbocyclic arylcarbonylamino,
•heterocyclyloxy,
•heterocyclyloxy substituted by C<sub>1</sub>-C<sub>3</sub> alkyl,
•substituted heterocyclyl-ethylideneaminooxy,
•C<sub>1</sub>-C<sub>3</sub> alkoxycarbonyl,
•C<sub>1</sub>-C<sub>3</sub> alkoxycarbonyl substituted by carbocyclic aryl,
•mono- or di-C<sub>1</sub>-C<sub>3</sub> alkylaminocarbonyl,
•mono- or di-carbocyclic arylamino,
•mono- or di-carbocyclic arylamino substituted by hydroxy,
•C<sub>1</sub>-C<sub>3</sub> alkylcalbonylamino,
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•C₁-C₃ alkylcalbonylamino substituted by substituent(s) independently selected from

- ••C₁-C₃ alkylcalbonylamino,
- ••carbocyclic arylcalbonylamino,
- ••heterocyclyl,
- •C₁-C₄ alkoxycalbonylamino,
- heterocyclyl calbonylamino,
- carbocyclic arylsulfonylamino,
- •carbocyclic arylsulfonylamino substituted by substituent(s) independently selected from
- ••nitro,
- ••C₁-C₃ alkyl,
- ••mono- or di-C₁-C₃ alkylamino,
- •C₁-C₃ alkylthio,
- •C₁-C₃ alkylthio substituted by substituent(s) independently selected from
- ••mono- or di-carbocyclic arylaminocarbonyl,
- ••halogenated mono- or di-carbocyclic arylaminocarbonyl,
- ••carbocyclic aryl,
- ••carbocyclic aryl substituted by substituent(s) independently selected from
- •••halogen,
- •••C₁-C₃ alkoxy,
- •carbocyclic arylthio,
- •carbocyclic arylthio substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- •carbocyclic arylsulfonyl,
- •halogenated carbocyclic arylsulfonyl,
- •heterocyclylthio,
- heterocyclylthio substituted by substituent(s) independently selected from
- ••nitro,
- ••C₁-C₃ alkyl,
- •C₃-C₆ cycloalkyl,
- •C₃-C₆ cycloalkyl substituted by C₁-C₃ alkyl,
- •C₃-C₆ cycloalkenyl.

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·carbocyclyl,

    carbocyclyl substituted by substituent(s) independently selected from

••halogen,
••C<sub>1</sub>-C<sub>3</sub> alkyl,
••C<sub>1</sub>-C<sub>3</sub> alkoxy,
••C<sub>2</sub>-C<sub>3</sub> alkenyl,
••C<sub>2</sub>-C<sub>3</sub> alkenyl substituted by carbocyclic aryl,
••C<sub>2</sub>-C<sub>3</sub> alkenyl substituted by carbocyclic aryl substituted C<sub>1</sub>-C<sub>3</sub> alkylsulfinyl,
·carbocyclic aryl,
•carbocyclic aryl substituted by substituent(s) independently selected from
••halogen,
••hydroxy,
..nitro.
••C<sub>1</sub>-C<sub>4</sub> alkyl,
••C<sub>1</sub>-C<sub>4</sub> alkyl substituted by substituent(s) independently selected from
•••OXO,
•••carbocyclic aryl,
•••heterocyclyl,
••C<sub>1</sub>-C<sub>4</sub> alkoxy,
••C<sub>1</sub>-C<sub>4</sub> alkoxy substituted by substituent(s) independently selected from
•••halogen,
•••carbocyclic aryl,
••carbocyclic aryloxy,
••C<sub>1</sub>-C<sub>3</sub> alkylcarbonyloxy,
••mono- or di-carbocyclic arylamino,
••halogenated mono- or di-carbocyclic arylamino,
••mono- or di-carbocyclic arylaminocarbonyl,
••mono- or di-carbocyclic arylaminocarbonyl substituted by substituent(s) independently
selected from
•••halogen,
•••nitro.
•••C<sub>1</sub>-C<sub>3</sub> alkyl,
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•••C<sub>1</sub>-C<sub>3</sub> alkoxy,
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- •••halogenated C₁-C₃ alkoxy,
- ••mercapto,
- ••C₁-C₃ alkylthio,
- ••halogenated C₁-C₃ alkylthio,
- ••C₁-C₃ alkylsulfonyl,
- ••C₃-C₆ cycloalkyl,
- ••carbocyclic aryl,
- ••heterocyclyl,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••hydroxy,
- ••C₁-C₃ alkyl,
- ••C₁-C₃ alkyl substituted by carbocyclic aryl,
- ••C₁-C₃ alkoxy,
- ••C₁-C₃ alkoxy substituted by carbocyclic aryl,
- ••carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- (ii) C₂-C₆ alkenyl,
- C2-C6 alkenyl substituted by substituent(s) independently selected from
- •oxo,
- •carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- ••C₁-C₃ alkyl,
- ••halogenated C₁-C₃ alkyl,
- ••C₁-C₃ alkoxy,
- ••halogenated C₁-C₃ alkoxy,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- •• hydroxy,

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••C<sub>1</sub>-C<sub>3</sub> alkyl,
••C<sub>1</sub>-C<sub>3</sub> alkoxy,
(iii) C<sub>3</sub>-C<sub>6</sub> cycloalkyl,
C<sub>3</sub>-C<sub>6</sub> cycloalkyl substituted by substituent(s) independently selected from
•C<sub>1</sub>-C<sub>3</sub> alkyl,
•C<sub>1</sub>-C<sub>3</sub> alkyl substituted by substituent(s) independently selected from
••oxo,
••carbocyclic aryl,
•carbocyclic arylcarbonylamino,
·carbocyclic aryl,
(iv) carbocyclyl,
carbocyclyl substituted by nitro,
(v) carbocyclic aryl,
carbocyclic aryl substituted by substituent(s) independently selected from
·halogen,
hydroxy,
•cyano,
•nitro,
•C<sub>1</sub>-C<sub>9</sub> alkyl,
•C<sub>1</sub>-C<sub>9</sub> alkyl substituted by substituent(s) independently selected from
••halogen,
••oxo,
••carbocyclic aryloxy,
••carbocyclylimino,
••carbocyclylimino substituted by carbocyclic aryl,
••mono- or di-carbocyclic arylaminocarbonyl,
••mono- or di-carbocyclic arylaminocarbonyl substituted by C<sub>1</sub>-C<sub>3</sub> alkoxy,
••carbocyclic aryl,
••carbocyclic aryl substituted by substituent(s) independently selected from
•••halogen,
•••C<sub>1</sub>-C<sub>3</sub> alkyl,
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•••halogenated C₁-C₃ alkyl,

- ••heterocyclyl,
- ••heterocyclyl substituted by C₁-C₃ alkyl,
- •C₁-C₇ alkoxy,
- •C₁-C₇ alkoxy substituted by substituent(s) independently selected from
- ••halogen,
- ••carbocyclic aryl,
- •C₁-C₃ alkylcarbonyloxy,
- carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by C₁-C₃ alkoxy,
- •C₁-C₃ alkoxycarbonyl,
- •mono- or di-C₁-C₃ alkylaminocarbonyl,
- •mono- or di-C₁-C₃ alkylaminocarbonyl substituted by carbocyclic aryl,
- •mono- or di-carbocyclic arylaminocarbonyl,
- •mono- or di-carbocyclic arylaminocarbonyl substituted by C₁-C₃ alkyl,
- ·amino,
- •mono- or di-C₁-C₃ alkylamino,
- •C₁-C₃ alkynylcarbonylamino,
- •C₁-C₃ alkynylcarbonylamino substituted by carbocyclic aryl,
- •carbocyclic arylsulfonylamino,
- •carbocyclic arylsulfonylamino substituted by C₁-C₃ alkyl,
- •(carbocyclic aryl)NHC(O)NH,
- •(carbocyclic aryl)NHC(O)NH substituted by C₁-C₃ alkoxy,
- •(carbocyclic aryl)NHC(O)NH substituted by haloganated C₁-C₃ alkoxy,
- •C₁-C₃ alkylthio,
- •halogenated C₁-C₃ alkylthio,
- •carbocyclic arylthio,
- carbocyclic arylthio substituted by cyano,
- •C₁-C₃ alkylsulfonyl,
- •mono- or di-C₁-C₃ alkylaminosulfonyl,
- •carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••C₁-C₇ alkyl,

- ••halogenated C₁-C₇ alkyl,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••C₁-C₃ alkyl,
- ••carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- (vi) heterocyclyl,
- or heterocyclyl substituted by substituent(s) independently selected from
- •halogen,
- •nitro,
- •C₁-C₄ alkyl,
- •C₁-C₄ alkyl substituted by substituent(s) independently selected from
- ••halogen,
- ••oxo,
- ••C₁-C₃ alkylthio,
- ••C₁-C₃ alkylthio substituted by carbocyclic aryl,
- ••C₁-C₃ alkylthio substituted by halogenated carbocyclic aryl,
- ··carbocyclic aryl,
- ··halogenated carbocyclic aryl,
- ••heterocyclyl,
- •C₁-C₃ alkoxy,
- •carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- •C₁-C₃ alkylthio,
- •C₁-C₃ alkenylthio,
- ·carbocyclic arylthio,
- •C₁-C₃ alkylsulfonyl,
- •carbocyclic arylsulfonyl,
- ·halogenated carbocyclic arylsulfonyl,
- •carbocyclic arylsulfonyl substituted by C₁-C₄ alkyl,

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·carbocyclic aryl,
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- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- ••C₁-C₃ alkyl,
- ••C₁-C₃ alkoxy,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••C₁-C₃ alkyl,
- ••halogenated C₁-C₃ alkyl;

Y is -C(0)-;

wherein carbocyclic aryl is phenyl, naphthyl, anthranyl, or biphenyl;

carbocyclyl is 10,11-dihydro-5-oxo-dibenzo[a,d]cycloheptyl, 1-oxo-indanyl, 9*H*-fluorenyl, 9-oxo-fluorenyl, acenaphthyl, anthraquinonyl, *C*-fluoren-9-ylidene, indanyl, indenyl, 1,2,3,4-tetrahydro-naphthyl, or bicyclo[2.2.1]hepteny;

heterocyclyl is 1,2,3-thiadiazolyl, 1,2,3-triazolyl, 1,2-dihydro-3-oxo-pyrazolyl, 1,3-dioxo-isoindolyl, 1*H*-indolyl, 1*H*-pyrrolyl, 1-oxo-3*H*-isobenzofuranyl, 2,3-dihydro-benzo[1,4]dioxinyl, 2,3-dihydro-benzofuryl, 2,4-dihydro-3-oxo-pyrazolyl, 2*H*-benzopyranyl, 2-oxo-benzopyranyl, 2-oxo-pyrrolidinyl, 3,4-dihydro-2*H*-benzo[b][1,4]dioxepinyl, 4-oxo-1,5,6,7-tetrahydro-indolyl, 4-oxo-3,4-dihydro-phthalazinyl, 4-oxo-benzopyranyl, 9,10,10-trioxo-thioxanthenyl, 9*H*-xanthenyl, azetidinyl, benzimidazolyl, benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl, benzo[b]thienyl, cinnolyl, furyl, imidazolyl, isoxazolyl, morpholino, morpholinyl, oxazolyl, oxolanyl, piperidyl, piridyl, pyrazolyl, pyridyl, pyrimidyl, pyrrolidyl, quinolyl, quinoxalyl, thiazolidyl, thiazolyl, thienyl, thiolanyl, tetrahydro-thienyl, benzofuranyl, or benzothiazolyl;

halogen is fluoro, chloro, bromo, or iodo; or a salt thereof.

3. A compound according to claim 2, wherein

R₁ represents

(i) C_1 - C_{10} alkyl,

C₁-C₁₀ alkyl substituted by substituent(s) independently selected from

- •oxo,
- •di-propylaminocarbonyl,
- •methoxy substituted by carbocyclic aryl,
- •methylcarbonyloxy,
- carbocyclic aryloxy,
- •halogenated carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by nitro,
- •heterocyclyloxy substituted by methyl,
- •substituted heterocyclyl-ethylideneaminooxy,
- •tert-butoxycarbonylamino,
- •carbocyclic arylcarbonylamino,
- •C₁-C₂ alkylthio,
- •C₁-C₂ alkylthio substituted by substituent(s) independently selected from
- ••halogenated carbocyclic aryl,
- ••carbocyclic aryl substituted by methoxy,
- •carbocyclic arylthio,
- •hetrocyclylthio substituted by nitro,
- •hetrocyclylthio substituted by methyl,
- •C₅-C₆ cycloalkyl,
- •C₅-C₆ cycloalkenyl,
- •carbocyclyl substituted by substituent(s) independently selected from
- ••halogen,
- ••methyl,
- ••methoxy,
- ••ethenyl substituted by carbocyclic aryl substituted methylsulfinyl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••hydroxy,
- ••nitro.
- ••C₁-C₄ alkyl,
- ••C₁-C₄ alkyl substituted by substituent(s) independently selected from

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•••oxo,
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- •••carbocyclic aryl,
- •••heterocyclyl,
- ••C₁-C₄ alkoxy,
- ••halogenated C₁-C₄ alkoxy,
- ••C₁-C₄ alkoxy substituted by carbocyclic aryl,
- ••carbocyclic aryloxy,
- ••halogenated mono-carbocyclic arylaminocarbonyl,
- ••carbocyclic aryl,
- ••heterocyclyl,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••C₁-C₂ alkyl,
- •• C₁-C₂ substituted by carbocyclic aryl,
- ••methoxy,
- ••methoxy substituted by carbocyclic aryl,
- ••carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- (ii) C2-C3 alkenyl substituted by substituent(s) independently selected from
- •carbocyclic aryl,
- •halogenated carbocyclic aryl,
- •carbocyclic aryl substituted by nitro,
- (iii) C₃-C₆ cycloalkyl,
- C₃-C₆ cycloalkyl substituted by substituent(s) independently selected from
- •methyl substituted by oxo,
- •methyl substituted by carbocyclic aryl,
- •carbocyclic aryl,
- (iv) carbocyclyl,
- (v) carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from
- halogen,
- hydroxy,

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cyano,nitro,C<sub>1</sub>-C<sub>9</sub> alkyl,
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•C₁-C₉ alkyl substituted by substituent(s) independently selected from

••halogen,

••oxo,

••carbocyclic aryl,

••carbocyclic aryl substituted by methyl,

••carbocyclic aryloxy,

•C₁-C₇ alkoxy,

•halogenated C₁-C₇ alkoxy,

•C₁-C₇ alkoxy substituted by carbocyclic aryl,

methylcarbonyloxy,

·carbocyclic aryloxy,

carbocyclic aryloxy substituted by methoxy,

•amino,

•di-methylamino,

•propargynylcarbonylamino substituted by carbocyclic aryl,

•carbocyclic arylsulfonylamino substituted by methyl,

•(carbocyclic aryl)NHC(O)NH substituted by halogenated methoxy,

•halogenated methylthio,

•carbocyclic arylthio substituted by cyano,

•di-propylamino sulfonyl,

•mono- or di- ethylaminocarbonyl substituted by carbocyclic aryl,

carbocyclic aryl,

•heterocyclyl substituted by methyl,

•heterocyclyl substituted by halogenated carbocyclic aryl,

(vi) heterocyclyl,

or heterocyclyl substituted by substituent(s) independently selected from

halogen,

•nitro,

•C₁-C₄ alkyl,

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•C<sub>1</sub>-C<sub>4</sub> alkyl substituted by substituent(s) independently selected from
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- ••halogen,
- methylthio substituted by halogenated carbocyclic aryl,
- ··carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- ••heterocyclyl,
- methoxy,
- carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by methyl,
- •C₁-C₃ alkylthio,
- •propenylthio,
- •carbocyclic arylthio,
- •C₁-C₃ alkylsulfonyl,
- •carbocyclic arylsulfonyl substituted by C₁-C₄ alkyl,
- carbocyclic aryl,
- •halogenated carbocyclic aryl,
- •carbocyclic aryl substituted by methyl,
- •carbocyclic aryl substituted by nitro,
- heterocyclyl;

R₂ is methylamino or dimethylamino;

L is selected from Formula Va, VIIIa, or IXa;

wherein R₄ and R₅ are independently selected from H or C₁-C₃ alkyl;

wherein carbocyclic aryl is phenyl, naphthyl, anthranyl, or biphenyl;

carbocyclyl is 1-oxo-indanyl, 9-oxo-fluorenyl, indenyl, anthraquinonyl, C-fluoren-9-ylidene, 1,2,3,4-tetrahydro-naphthyl, or bicyclo[2.2.1]hepteny;

heterocyclyl is 1,2,3-thiadiazolyl, 1,2,3-triazolyl, 1,2-dihydro-3-oxo-pyrazolyl, 1,3-dioxo-isoindolyl, 1*H*-indolyl, 1*H*-pyrrolyl, 1-oxo-3*H*-isobenzofuranyl, 2,3-dihydro-benzo[1,4]dioxinyl, 2,4-dihydro-3-oxo-pyrazolyl, 2*H*-benzopyranyl, 2-oxo-benzopyranyl, 3,4-dihydro-2*H*-benzo[b][1,4]dioxepinyl, 4-oxo-3,4-dihydro-phthalazinyl, 4-oxo-benzopyranyl, 9,10,10-trioxo-thioxanthenyl, 9*H*-xanthenyl, azetidinyl, benzimidazolyl, benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl, benzo[b]thienyl, furyl, imidazolyl, isoxazolyl, morpholino, morpholinyl, oxolanyl, piperidyl, piridyl, pyrazolyl, pyridyl, quinolyl,

quinoxalyl, thiazolidyl, thiazolyl, thienyl, thiolanyl, 2,3-dihydro-1-oxo-isoindolyl, 2,3-dihydro-benzofuryl, 2-oxo-pyrrolidinyl, 4-oxo-1,5,6,7-tetrahydro-indolyl, cinnolyl, pyrrolidyl, tetrahydro-thienyl, benzofuranyl, or benzothiazolyl;

halogen is fluoro, chloro, bromo, or iodo; or a salt thereof.

- 4. A compound according to claim 3, wherein
- R₁ represents
- (i) C₁-C₁₀ alkyl substituted by substituent(s) independently selected from
- •oxo,
- •di-propylaminocarbonyl,
- •methoxy substituted by carbocyclic aryl,
- methylcarbonyloxy,
- carbocyclic aryloxy,
- •halogenated carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by nitro,
- •heterocyclyloxy substituted by methyl,
- •substituted heterocyclyl-ethylideneaminooxy,
- •tert-butoxycarbonylamino,
- ·carbocyclic arylcarbonylamino,
- •C₁-C₂ alkylthio,
- •C₁-C₂ alkylthio substituted by substituent(s) independently selected from
- ••halogenated carbocyclic aryl,
- ••carbocyclic aryl substituted by methoxy,
- ·carbocyclic arylthio,
- •hetrocyclylthio substituted by nitro,
- •hetrocyclylthio substituted by methyl,
- •C₅-C₆ cycloalkenyl,
- •carbocyclyl substituted by substituent(s) independently selected from
- ••halogen,
- ••methyl,
- ••methoxy,

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••ethenyl substituted by carbocyclic aryl substituted methylsulfinyl,
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- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••hydroxy,
- ••nitro,
- ••C₁-C₄ alkyl,
- ••C₁-C₄ alkyl substituted by substituent(s) independently selected from
- •••OXO,
- •••carbocyclic aryl,
- •••heterocyclyl,
- ••C₁-C₄ alkoxy,
- ••halogenated C₁-C₄ alkoxy,
- ••C₁-C₄ alkoxy substituted by carbocyclic aryl,
- ••carbocyclic aryloxy,
- ••halogenated mono-carbocyclic arylaminocarbonyl,
- ••carbocyclic aryl,
- ••heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••C₁-C₂ alkyl,
- •• C₁-C₂ substituted by carbocyclic aryl,
- ••methoxy,
- ••methoxy substituted by carbocyclic aryl,
- ••carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- (ii) C₂-C₃ alkenyl substituted by substituent(s) independently selected from
- •carbocyclic aryl,
- •halogenated carbocyclic aryl,
- •carbocyclic aryl substituted by nitro,
- (iii) C₃-C₆ cycloalkyl substituted by substituent(s) independently selected from
- •methyl substituted by oxo,
- •methyl substituted by carbocyclic aryl,
- ·carbocyclic aryl,

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(iv) carbocyclyl,
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- (v) carbocyclic aryl substituted by substituent(s) independently selected from
- •halogen,
- hydroxy,
- •cyano,
- nitro,
- •C₁-C₉ alkyl,
- •C₁-C₉ alkyl substituted by substituent(s) independently selected from
- ••halogen,
- ••oxo,
- ··carbocyclic aryl,
- ••carbocyclic aryl substituted by methyl,
- ••carbocyclic aryloxy,
- •C₁-C₇ alkoxy,
- •halogenated C₁-C₇ alkoxy,
- •C₁-C₇ alkoxy substituted by carbocyclic aryl,
- methylcarbonyloxy,
- ·carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by methoxy,
- •amino,
- ·di-methylamino,
- •propargynylcarbonylamino substituted by carbocyclic aryl,
- •carbocyclic arylsulfonylamino substituted by methyl,
- •(carbocyclic aryl)NHC(O)NH substituted by halogenated methoxy,
- ·halogenated methylthio,
- •carbocyclic arylthio substituted by cyano,
- •di-propylamino sulfonyl,
- •mono- or di- ethylaminocarbonyl substituted by carbocyclic aryl.
- carbocyclic aryl,
- •heterocyclyl substituted by methyl,
- •heterocyclyl substituted by halogenated carbocyclic aryl,
- (vi) or heterocyclyl substituted by substituent(s) independently selected from

- ·halogen,
- nitro,
- •C₁-C₄ alkyl,
- •C₁-C₄ alkyl substituted by substituent(s) independently selected from
- ··halogen,
- methylthio substituted by halogenated carbocyclic aryl,
- ••carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- ••heterocyclyl,
- ·methoxy,
- •carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by methyl,
- •C₁-C₃ alkylthio,
- •propenylthio,
- ·carbocyclic arylthio,
- •C₁-C₃ alkylsulfonyl,
- •carbocyclic arylsulfonyl,
- •carbocyclic arylsulfonyl substituted by C₁-C₄ alkyl,
- •carbocyclic aryl,
- •halogenated carbocyclic aryl,
- •carbocyclic aryl substituted by methyl,
- •carbocyclic aryl substituted by nitro,
- •heterocyclyl;

L is selected from Formula XX - XXII;

wherein carbocyclic aryl is phenyl, naphthyl, or biphenyl; carbocyclyl is 1-oxo-indanyl, 9-oxo-fluorenyl, indenyl, anthraquinonyl, C-fluoren-

9-ylidene, 1,2,3,4-tetrahydro-naphthyl, or bicyclo[2.2.1]hepteny;

heterocyclyl is 1,2,3-thiadiazolyl, 1,2,3-triazolyl, 1,2-dihydro-3-oxo-pyrazolyl, 1*H*-indolyl, 1*H*-pyrrolyl, 2,4-dihydro-3-oxo-pyrazolyl, 2*H*-benzopyranyl, 4-oxo-benzopyranyl, azetidinyl, benzo[b]thienyl, furyl, isoxazolyl, morpholinyl, piperidyl, piridyl, pyrazolyl, pyridyl, quinolyl, thiazolidyl, thiazolyl, thiolanyl, 2,3-dihydro-1-oxo-isoindolyl, 2,3-dihydro-benzofuryl, 2-oxo-benzopyranyl, 2-oxo-pyrrolidinyl, 4-oxo-1,5,6,7-tetrahydro-indolyl, 9*H*-xanthenyl, cinnolyl, imidazolyl, morpholino, pyrimidyl, pyrrolidyl, tetrahydro-thienyl, benzofuranyl, or benzothiazolyl;

halogen is fluoro, chloro, bromo, or iodo; or a salt thereof.

5. A compound according to claim 4, wherein

R₁ represents

- (i) C₁-C₅ alkyl substituted by substituent(s) independently selected from
- •oxo,
- •di-propylaminocarbonyl,
- •methoxy substituted by carbocyclic aryl,
- methylcarbonyloxy,
- carbocyclic aryloxy,
- •halogenated carbocyclic aryloxy,
- carbocyclic aryloxy substituted by nitro,
- •heterocyclyloxy substituted by methyl,
- •substituted heterocyclyl-ethylideneaminooxy,
- •tert-butoxycarbonylamino,
- •carbocyclic arylcarbonylamino,
- •C₁-C₂ alkylthio,
- •C₁-C₂ alkylthio substituted by substituent(s) independently selected from
- ••halogenated carbocyclic aryl,
- ••carbocyclic aryl substituted by methoxy,
- •carbocyclic arylthio,
- •hetrocyclylthio substituted by nitro,
- •hetrocyclylthio substituted by methyl,

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•cyclohexenyl,
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- •carbocyclyl substituted by substituent(s) independently selected from
- ••halogen,
- ••methyl,
- ••methoxy,
- ••ethenyl substituted by carbocyclic aryl substituted methylsulfinyl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••hydroxy,
- ••nitro,
- •• C₁-C₄ alkyl,
- ••C₁-C₄ alkyl substituted by substituent(s) independently selected from
- •••oxo,
- •••carbocyclic aryl,
- •••heterocyclyl,
- ••C₁-C₂ alkoxy,
- ••halogenated C₁-C₂ alkoxy,
- ••C₁-C₂ alkoxy substituted by carbocyclic aryl,
- ··carbocyclic aryloxy,
- ••halogenated mono-carbocyclic arylaminocarbonyl,
- ••carbocyclic aryl,
- ••heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••C₁-C₂ alkyl,
- •• C₁-C₂ substituted by carbocyclic aryl,
- ••methoxy.
- ••methoxy substituted by carbocyclic aryl,
- ··carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- (ii) C₂-C₃ alkenyl substituted by substituent(s) independently selected from
- ·carbocyclic aryl,
- ·halogenated carbocyclic aryl,

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•carbocyclic aryl substituted by nitro,
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- (iii) C₃-C₆ cycloalkyl substituted by substituent(s) independently selected from
- •methyl substituted by oxo,
- •methyl substituted by carbocyclic aryl,
- ·carbocyclic aryl,
- (iv) carbocyclyl,
- (v) carbocyclic aryl substituted by substituent(s) independently selected from
- ·halogen,
- hydroxy,
- •cyano,
- •nitro,
- •C₁-C₄ alkyl,
- •C₁-C₂ alkyl substituted by substituent(s) independently selected from
- ••halogen,
- ••oxo,
- ••carbocyclic aryl,
- ••carbocyclic aryl substituted by methyl,
- ··carbocyclic aryloxy,
- •C₁-C₂ alkoxy,
- •halogenated C₁-C₂ alkoxy,
- •C₁-C₂ alkoxy substituted by carbocyclic aryl,
- methylcarbonyloxy,
- •carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by methoxy,
- ·amino,
- •di-methylamino,
- •propargynylcarbonylamino substituted by carbocyclic aryl,
- •carbocyclic arylsulfonylamino substituted by methyl,
- •(carbocyclic aryl)NHC(O)NH substituted by halogenated methoxy,
- ·halogenated methylthio.
- •carbocyclic arylthio substituted by cyano,
- •di-propylamino sulfonyl,

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•mono- or di- ethylaminocarbonyl substituted by carbocyclic aryl,
·carbocyclic aryl,
•heterocyclyl substituted by methyl,
•heterocyclyl substituted by halogenated carbocyclic aryl,
(vi) or heterocyclyl substituted by substituent(s) independently selected from
·halogen,
•nitro,
•C<sub>1</sub>-C<sub>4</sub> alkyl,
•C<sub>1</sub>-C<sub>4</sub> alkyl substituted by substituent(s) independently selected from
••halogen,
•methylthio substituted by halogenated carbocyclic aryl,
••carbocyclic aryl,
halogenated carbocyclic aryl,
••heterocyclyl,
·methoxy,
·carbocyclic aryloxy,

    carbocyclic aryloxy substituted by methyl,

•C<sub>1</sub>-C<sub>3</sub> alkylthio,
•propenylthio,
·carbocyclic arylthio,
•C<sub>1</sub>-C<sub>3</sub> alkylsulfonyl,
•carbocyclic arylsulfonyl,
·carbocyclic arylsulfonyl substituted by methyl,
·carbocyclic aryl,
·halogenated carbocyclic aryl,
·carbocyclic aryl substituted by methyl,
·carbocyclic aryl substituted by nitro,
heterocyclyl;
        wherein carbocyclic aryl is phenyl, naphthyl, or biphenyl;
        carbocyclyl is 1-oxo-indanyl, indenyl, 9-oxo-fluorenyl, 1,2,3,4-tetrahydro-naphthyl,
or bicyclo[2.2.1]hepteny;
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heterocyclyl is 1H-indolyl, 2,4-dihydro-3-oxo-pyrazolyl, furyl, pyrazolyl, pyridyl,

thienyl, 1,2,3-triazolyl, 1*H*-pyrrolyl, 2,3-dihydro-1-oxo-isoindolyl, 2,3-dihydro-benzofuryl, 2*H*-benzopyranyl, 2-oxo-benzopyranyl, 4-oxo-1,5,6,7-tetrahydro-indolyl, imidazolyl, isoxazolyl, morpholino, morpholinyl, pyrazolyl, pyrimidyl, quinolyl, thiazolyl, tetrahydro-thienyl, benzofuranyl, or benzothiazolyl;

halogen is fluoro, chloro, bromo, or iodo; or a salt thereof.

6. A compound according to claim 5 of Formua I selected from the group consisting of

; or, in case of, a salt thereof.

7. A compound according to claim 3, wherein

R₁ represents

- (i) C_1 - C_{10} alkyl,
- C₁-C₁₀ alkyl substituted by substituent(s) independently selected from
- •C₅-C₆ cycloalkyl,
- •carbocyclic aryl,
- •heterocyclyl,
- (ii) C₃-C₆ cycloalkyl,
- (iii) carbocyclic aryl,
- (iv) or heterocyclyl;

L is selected from Formula XX - XXII;

wherein carbocyclic aryl is phenyl, naphthyl, anthranyl, or biphenyl;

heterocyclyl is 1,3-dioxo-isoindolyl, 1*H*-indolyl, 1-oxo-3*H*-isobenzofuranyl, 2,3-dihydro-benzo[1,4]dioxinyl, 3,4-dihydro-2*H*-benzo[b][1,4]dioxepinyl, 4-oxo-3,4-dihydro-phthalazinyl, 9,10,10-trioxo-thioxanthenyl, 9*H*-xanthenyl, benzimidazolyl, benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl, benzo[b]thienyl, furyl, imidazolyl, isoxazolyl, morpholino, oxolanyl, piperidyl, pyridyl, quinoxalyl, thienyl, quinolyl, or benzothiazolyl;

or a salt thereof.

8. A compound according to claim 7, wherein

R₁ represents

- (i) C₁-C₄ alkyl,
- C₁-C₄ alkyl substituted by substituent(s) independently selected from
- •cyclopentyl,
- •carbocyclic aryl,
- •heterocyclyl,
- (ii) carbocyclic aryl,
- (iii) or heterocyclyl;

wherein carbocyclic aryl is phenyl, naphthyl, anthranyl, or biphenyl;

heterocyclyl is 9H-xanthenyl, benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl,

benzo[b]thienyl, thienyl, 1H-indolyl, quinoxalyl, quinolyl, or benzothiazolyl;

or a salt thereof.

9. A compound according to claim 8 of Formua I thereof selected from the group consisting of

; or, in case of, a salt thereof.

10. A compound according to claim 1, wherein Q is Fornura II; R_1 represents

- (i) C_1 - C_{10} alkyl,
- C₁-C₁₀ alkyl substituted by substituent(s) independently selected from
- ·halogen,
- hydroxy,
- •oxo,
- •C₁-C₃ alkoxy,
- •C₁-C₃ alkoxy substituted by substituent(s) independently selected from
- ••carbocyclic aryl,
- ••heterocyclyl,
- ••heterocyclyl substituted by C₁-C₃ alkyl,
- carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- ••carbocyclic aryl,
- ••carbocyclic aryl substituted by C1-C3 alkoxy,
- ••C₁-C₄ alkyl,
- ••C₁-C₄ alkyl substituted by substituent(s) independently selected from
- •••mono- or di-C1-C3 alkylamino,
- •••mono- or di-C1-C3 alkylamino substituted by carbocyclic aryl,
- •••mono- or di-C₁-C₃ alkylamino substituted by halogenated carbocyclic aryl,
- •mono- or di-C1-C3 alkylamino,
- •mono- or di-C₁-C₃ alkylamino substituted by substituent(s) independently selected from
- ••cyano,
- ••carbocyclic aryl,
- ••heterocyclyl,
- •mono- or di-carbocyclic arylamino,
- •mono- or di-carbocyclic arylamino substituted by C₁-C₃ alkyl,
- •C₁-C₃ alkylcalbonylamino,
- •C₁-C₄ alkoxycalbonylamino,

- •carbocyclic arylsulfonylamino,
- •carbocyclic arylsulfonylamino substituted by substituent(s) independently selected from
- ••nitro,
- ••C₁-C₃ alkyl,
- ••mono- or di-C₁-C₃ alkylamino,
- •C₁-C₃ alkylthio,
- •C₁-C₃ alkylthio substituted by substituent(s) independently selected from
- ••mono- or di-carbocyclic arylamino,
- ••halogenated mono- or di-carbocyclic arylamino,
- ··carbocyclic aryl,
- ••carbocyclic aryl substituted by substituent(s) independently selected from
- •••halogen,
- •••C₁-C₃ alkoxy,
- ·carbocyclic arylthio,
- •carbocyclic arylthio substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- •carbocyclic arylsulfonyl,
- •halogenated carbocyclic arylsulfonyl,
- heterocyclylthio,
- •C₃-C₆ cycloalkyl,
- •C₃-C₆ cycloalkyl substituted by C₁-C₃ alkyl,
- •carbocyclyl,
- •carbocyclyl substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- ••C₂-C₃ alkenyl,
- ••C2-C3 alkenyl substituted by carbocyclic aryl,
- ••C₂-C₃ alkenyl substituted by carbocyclic aryl substituted C₁-C₃ alkylsulfinyl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,

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••hydroxy,
••nitro,
••C<sub>1</sub>-C<sub>4</sub> alkyl,
••C<sub>1</sub>-C<sub>4</sub> alkyl substituted by substituent(s) independently selected from
•••halogen,
•••hydroxy,
•••carbocyclic aryl,
•••mono- or di-carbocyclic arylamino,
•••mono- or di-carbocyclic arylamino substituted by substituent(s) independently selected
from
••••halogen,
••••nitro,
••••C<sub>1</sub>-C<sub>3</sub> alkyl,
••••C_1-C_3 alkoxy,
••••halogenated C1-C3 alkoxy,
••C<sub>1</sub>-C<sub>3</sub> alkoxy,
••C<sub>1</sub>-C<sub>3</sub> alkoxy substituted by substituent(s) independently selected from
•••halogen,
•••carbocyclic aryl,
••carbocyclic aryloxy,
••C<sub>1</sub>-C<sub>3</sub> alkoxycarbonyl,
••mono- or di-C1-C3 alkylamino,
••C<sub>1</sub>-C<sub>3</sub> alkylthio,
••halogenated C<sub>1</sub>-C<sub>3</sub> alkylthio,
••C<sub>1</sub>-C<sub>3</sub> alkylsulfonyl,
••C<sub>3</sub>-C<sub>6</sub> cycloalkyl,
 ••carbocyclic aryl,
 ••heterocyclyl,
 ·heterocyclyl,
 •heterocyclyl substituted by substituent(s) independently selected from
 ••C<sub>1</sub>-C<sub>3</sub> alkyl,
 ••C<sub>1</sub>-C<sub>3</sub> alkoxy,
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••C<sub>1</sub>-C<sub>3</sub> alkoxy substituted by carbocyclic aryl,
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- ••carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- (ii) C2-C8 alkenyl,
- C2-C8 alkenyl substituted by substituent(s) independently selected from
- ·halogen,
- •C₁-C₃ alkoxy,
- •C₁-C₃ alkoxy substituted by carbocyclic aryl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••hydroxy,
- ••C₁-C₃ alkoxy,
- ••halogenated C₁-C₃ alkoxy,
- •heterocyclyl,
- •heterocyclyl substituted by nitro,
- (iii) C2-C4 alkynyl,
- C₂-C₄ alkynyl substituted by carbocyclic aryl,
- (iv) C₃-C₆ cycloalkyl,
- C₃-C₆ cycloalkyl substituted by substituent(s) independently selected from
- •C₁-C₃ alkyl,
- •C₁-C₃ alkyl substituted by substituent(s) independently selected from
- ••hydroxy,
- ••oxo,
- ··carbocyclic aryl,
- •mono- or di-C₁-C₃ alkylamino,
- •mono- or di-C₁-C₃ alkylamino substituted by carbocyclic aryl,
- ·carbocyclic aryl,
- (v) C₃-C₆ cycloalkeyl,
- C₃-C₆ cycloalkeyl substituted by C₁-C₃ alkyl.
- (vi) carbocyclyl,
- carbocyclyl substituted by substituent(s) independently selected from

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hydroxy,
•nitro,
(vii) carbocyclic aryl,
carbocyclic aryl substituted by substituent(s) independently selected from
·halogen,
hydroxy,
•cyano,
nitro,
•C<sub>1</sub>-C<sub>9</sub> alkyl,
•C<sub>1</sub>-C<sub>9</sub> alkyl substituted by substituent(s) independently selected from
••halogen,
••hydroxy,
••oxo,
••C<sub>1</sub>-C<sub>3</sub> alkoxy,
••carbocyclic aryloxy,
••mono- or di-C<sub>1</sub>-C<sub>3</sub> alkylamino-N-oxy,
••mono- or di-C<sub>1</sub>-C<sub>3</sub> alkylamino,
••mono- or di-C<sub>1</sub>-C<sub>3</sub> alkylamino substituted by carbocyclic aryl,
••mono- or di-carbocyclic arylamino,
••mono- or di-carbocyclic arylamino substituted by C<sub>1</sub>-C<sub>3</sub> alkoxy,
••carbocyclic aryl,
••halogenated carbocyclic aryl,
••heterocyclyl,
••heterocyclyl substituted by C<sub>1</sub>-C<sub>3</sub> alkyl,
•C<sub>2</sub>-C<sub>3</sub> alkenyl,
•C<sub>2</sub>-C<sub>3</sub> alkenyl substituted by carbocyclic aryl,
•C<sub>1</sub>-C<sub>9</sub> alkoxy,
•C<sub>1</sub>-C<sub>9</sub> alkoxy substituted by substituent(s) independently selected from
••hydroxy,
••halogen,
••carboxy,
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••mono- or di-C₁-C₃ alkylamino,

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··carbocyclic aryl,
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- ••halogenated carbocyclic aryl,
- ••heterocyclyl,
- ••heterocyclyl substituted by substituent(s) independently selected from
- •••heterocyclyl,
- •••heterocyclyl substituted by substituent(s) independently selected from
- ••••halogen,
- •••• C_1 - C_3 alkyl,
- ••••halogenated C1-C3 alkyl,
- •C₂-C₃ alkenyloxy,
- •C₁-C₃ alkylcarbonyloxy,
- ·carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₄ alkyl,
- ••halogenated C₁-C₄ alkyl,
- ••C₁-C₃ alkoxy,
- •heterocyclyloxy,
- •heterocyclyloxy substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- ••halogenated C₁-C₃ alkyl,
- •(carbocyclic aryl)S(O)₂O,
- ·carboxy,
- •C₁-C₃ alkoxycarbonyl,
- •mono- or di-C₁-C₃ alkylaminocarbonyl,
- •mono- or di-C₁-C₃ alkylaminocarbonyl substituted by carbocyclic aryl,
- •amino,
- •mono- or di-C₁-C₄ alkylamino,
- •mono- or di-C₁-C₄ alkylamino substituted by cyano,
- •mono- or di-carbocyclic arylamino,
- •C₁-C₃ alkylcarbonylamino,

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·carbocyclic arylsulfonylamino,
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- •carbocyclic arylsulfonylamino substituted by C₁-C₃ alkyl,
- •(carbocyclic aryl)NHC(O)NH,
- •(carbocyclic aryl)NHC(O)NH substituted by C₁-C₃ alkoxy,
- •(carbocyclic aryl)NHC(O)NH substituted by haloganated C₁-C₃ alkoxy,
- •C₁-C₃ alkylthio,
- •halogenated C₁-C₃ alkylthio,
- carbocyclic arylthio,
- •halogenated carbocyclic arylthio,
- •carbocyclic arylthio substituted by C₁-C₃ alkyl,
- •heterocyclylthio,
- •C₁-C₃ alkylsulfonyl,
- •mono- or di-C₁-C₃ alkylaminosulfonyl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••C₁-C₇ alkyl,
- ••halogenated C₁-C₇ alkyl,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- ••C₁-C₃ alkyl,
- ••carbocyclic aryl,
- ••halogenated carbocyclic aryl,
- (viii) heterocyclyl,
- or heterocyclyl substituted by substituent(s) independently selected from
- •halogen,
- hydroxy,
- •cyano,
- •nitro,
- •C₁-C₄ alkyl,
- •C₁-C₄ alkyl substituted by substituent(s) independently selected from
- ••halogen,
- ••hydroxy,

```
••oxo,
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- ••C₁-C₃ alkylcarbonyloxy,
- ••C₁-C₃ alkoxycarbonyl,
- ••C₁-C₃ alkylthio,
- ••C₁-C₃ alkylthio substituted by carbocyclic aryl,
- ••C₁-C₃ alkylthio substituted by halogenated carbocyclic aryl,
- ··carbocyclic aryl,
- ••carbocyclic aryl substituted by substituent(s) independently selected from
- •••halogen,
- •••nitro,
- ••heterocyclyl,
- •C₁-C₃ alkoxy,
- •C₁-C₃ alkoxy substituted by carbocyclic aryl,
- •carbocyclic aryloxy,
- •carbocyclic aryloxy substituted by C₁-C₃ alkyl,
- •mono- or di-C₁-C₃ alkylamino,
- •C₁-C₄ alkylcarbonylamino,
- •C₁-C₃ alkylthio,
- •carbocyclic arylthio,
- •halogenated carbocyclic arylthio,
- •carbocyclic arylthio substituted by C₁-C₃ alkoxycarbonyl,
- •heterocyclylthio,
- •heterocyclylthio substituted by C₁-C₃ alkyl,
- •C₁-C₃ alkylsulfonyl,
- ·carbocyclic arylsulfonyl,
- •carbocyclic arylsulfonyl substituted by C₁-C₄ alkyl,
- •C₁-C₃ alkoxycarbonyl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- ••C₁-C₃ alkyl,

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••halogenated C<sub>1</sub>-C<sub>3</sub> alkyl,
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- ••C₁-C₃ alkoxy,
- ••halogenated C₁-C₃ alkoxy,
- •heterocyclyl,
- •heterocyclyl substituted by substituent(s) independently selected from
- $\bullet \cdot C_1 C_3$ alkyl,
- ••halogenated C₁-C₃ alkyl,
- ••C₁-C₃ alkoxy,
- ••C₁-C₃ alkoxycarbonyl;

Y is $-(CH_2)_m$, m is 0 or 1;

wherein carbocyclic aryl is phenyl, naphthyl, biphenyl, or phenanthryl; carbocyclyl is 9*H*-fluorenyl, 9-oxo-fluorenyl, acenaphthyl, anthraquinonyl, indanyl, or indenyl;

heterocyclyl is 1,2,3-thiadiazolyl, 1,2,3-triazolyl, 1,2-dihydro-3-oxo-pyrazolyl, 1,3,4-thiadiazolyl, 1,3-dioxo-isoindolyl, 1,3-dioxolanyl, 1*H*-indolyl, 1*H*-pyrrolo[2,3-c]pyridyl, 1*H*-pyrrolyl, 2,2',5',2"-terthiophenyl, 2,2'-bithiophenyl, 2,3-dihydro-1-oxo-isoindolyl, 2,3-dihydro-benzo[1,4]dioxinyl, 2,3-dihydro-benzofuryl, 2,4-dihydro-3-oxo-pyrazolyl, 2*H*-benzopyranyl, 2-oxo-pyrrolidinyl, 3,4-dihydro-2*H*-benzo[1,4]oxazinyl, 3,4-dihydro-2*H*-benzo[b][1,4]dioxepinyl, 4*H*-benzo[1,3]dioxinyl, 4*H*-benzopyranyl, 4-oxo-1,5,6,7-tetrahydro-indolyl, 4-oxo-benzopyranyl, 9*H*-carbazolyl, 9*H*-xanthenyl, azetidinyl, benzimidazolyl, benzo[1,3]dioxolyl, benzo[b]thienyl, benzofuryl, benzothiazolyl, furyl, imidazo[2,1-b]thiazolyl, imidazolyl, isoxazolyl, morpholino, morpholinyl, oxolanyl, piperazyl, piperidyl, pyrazolo[5,1-b]thiazolyl, pyrazolyl, pyridyl, pyrimidyl, pyrrolidyl, quinoxalyl, thiazolidyl, thiazolyl, thienyl, or thiolanyl;

halogen is fluoro, chloro, bromo, or iodo; or a salt thereof.

- 11. A compound according to claim 10, wherein
- R₁ represents
- (i) C₁-C₁₀ alkyl substituted by substituent(s) independently selected from •methoxy,
- •methoxy substituted by carbocyclic aryl,

```
·carbocyclic aryloxy,
```

- ·halogenated carbocyclic aryloxy,
- •mono-C₁-C₂ alkylamino substituted by cyano,
- •mono- or di-C₁-C₂ alkylamino substituted by carbocyclic aryl,
- •mono-carbocyclic arylamino,
- •mono-carbocyclic arylamino substituted by methyl,
- •carbocyclic arylsulfonylamino substituted by methyl,
- •carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- ••C₁-C₄ alkyl,
- ••C₁-C₄ alkyl substituted by carbocyclic aryl,
- ••C₁-C₄ alkyl substituted by hydroxy,
- ••C₁-C₂ alkoxy,
- ••halogenated C₁-C₂ alkoxy,
- •heterocyclyl substituted by carbocyclic aryl,
- (ii) C₂-C₈ alkenyl substituted by substituent(s) independently selected from
- methoxy substituted by carbocyclic aryl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by methoxy,
- (iii) C₂-C₄ alkynyl substituted by carbocyclic aryl,
- (iv) cyclohexyl substituted by carbocyclic arylmethyl,
- (v) carbocyclyl,
- (vi) carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from
- •halogen,
- hydroxy,
- ·cyano,
- •amino,
- •C₁-C₉ alkyl,
- •halogenated C₁-C₉ alkyl,

```
•C<sub>1</sub>-C<sub>9</sub> alkoxy,
•C<sub>1</sub>-C<sub>9</sub> alkoxy substituted by substituent(s) independently selected from
••halogen,
••halogenated carbocyclic aryl,
propenyloxy,
·methylamino,
•di-C<sub>1</sub>-C<sub>2</sub> alkylamino,
•di-C<sub>1</sub>-C<sub>2</sub> alkylamino substituted by cyano,
·methylthio,
•halogenated methylthio,
(vii) heterocyclyl,
or heterocyclyl substituted by substituent(s) independently selected from
·halogen,
•C<sub>1</sub>-C<sub>4</sub> alkyl,
•C<sub>1</sub>-C<sub>4</sub> alkyl substituted by hydroxy,
•C<sub>1</sub>-C<sub>4</sub> alkyl substituted by carbocyclic aryl,
·methoxy,
•C<sub>1</sub>-C<sub>2</sub> alkoxycarbonyl,
•carbocyclic arylthio substituted by methoxycarbonyl,

    carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from
••halogen,
.. halogenated methyl,
heterocyclyl;
        R<sub>2</sub> is methylamino or dimethylamino;
        L is selected from Formula Va, VIIIa, or IXa;
        wherein carbocyclic aryl is phenyl, naphthyl, biphenyl, or phenanthryl;
        carbocyclyl is 9H-fluorenyl, acenaphthyl, or anthraquinonyl;
        heterocyclyl is 1,2,3-thiadiazolyl, 1,2,3-triazolyl, 1,2-dihydro-3-oxo-pyrazolyl, 1,3-
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heterocyclyl is 1,2,3-thiadiazolyl, 1,2,3-triazolyl, 1,2-dihydro-3-oxo-pyrazolyl, 1,3-dioxolanyl, 1*H*-indolyl, 1*H*-pyrrolyl, 2,2',5',2"-terthiophenyl, 2,2'-bithiophenyl, 2,3-dihydro-benzo[1,4]dioxinyl, 3,4-dihydro-2*H*-benzo[1,4]oxazinyl, 4-oxo-benzopyranyl, 9*H*-carbazolyl, 9*H*-xanthenyl, benzimidazolyl, benzo[1,3]dioxolyl, benzo[b]thienyl, benzofuryl,

benzothiazolyl, furyl, imidazolyl, isoxazolyl, oxolanyl, pyrazolo[5,1-b]thiazolyl, pyrazolyl, pyridyl, pyrimidyl, quinolyl, quinoxalyl, thiazolyl, thiazolyl, thiazolyl, thiazolyl, thiazolyl, 2*H*-benzopyranyl, 4*H*-benzo[1,3]dioxinyl, azetidinyl, imidazo[2,1-b]thiazolyl, morpholinyl, or 2,3-dihydrobenzofuryl;

halogen is fluoro, chloro, bromo, or iodo; or a salt thereof.

- 12. A compound according to claim 11, wherein
- R₁ represents
- (i) C₁-C₇ alkyl substituted by substituent(s) independently selected from
- ·methoxy,
- •methoxy substituted by carbocyclic aryl,
- carbocyclic aryloxy,
- halogenated carbocyclic aryloxy,
- •mono-ethylamino substituted by cyano,
- •di-methylamino substituted by carbocyclic aryl,
- •mono-carbocyclic arylamino,
- •mono-carbocyclic arylamino substituted by methyl,
- •carbocyclic arylsulfonylamino substituted by methyl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- ••C₁-C₄ alkyl,
- ••C₁-C₄ alkyl substituted by carbocyclic aryl,
- ••C₁-C₄ alkyl substituted by hydroxy,
- ••metoxy,
- ••halogenated methoxy,
- •heterocyclyl substituted by carbocyclic aryl,
- (ii) C2-C7 alkenyl substituted by substituent(s) independently selected from
- methoxy substituted by carbocyclic aryl,
- carbocyclic aryl,

```
•carbocyclic aryl substituted by methoxy,
```

- (iii) butynyl substituted by carbocyclic aryl,
- (iv) cyclohexyl substituted by carbocyclic arylmethyl,
- (v) carbocyclyl,
- (vi) carbocyclic aryl,

carbocyclic aryl substituted by substituent(s) independently selected from

- ·halogen,
- hydroxy,
- •cyano,
- ·amino,
- •C₁-C₂ alkyl,
- •halogenated methyl,
- •C₁-C₃ alkoxy,
- •C₁-C₃ alkoxy substituted by substituent(s) independently selected from
- ••halogen,
- ••halogenated carbocyclic aryl,
- •propenyloxy,
- •di-C₁-C₂ alkylamino,
- •di-C₁-C₂ alkylamino substituted by cyano,
- •methylthio,
- •halogenated methylthio,
- (vii) heterocyclyl,
- or heterocyclyl substituted by substituent(s) independently selected from
- •halogen,
- •C₁-C₃ alkyl,
- •C₁-C₃ alkyl substituted by hydroxy,
- •C₁-C₃ alkyl substituted by carbocyclic aryl,
- methoxy,
- •ethoxycarbonyl,
- •carbocyclic arylthio substituted by methoxycarbonyl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from

```
••halogen,
```

••halogenated methyl,

heterocyclyl;

L is selected from Formula XX - XXII; wherein carbocyclic aryl is phenyl, naphthyl, or biphenyl; carbocyclyl is acenaphthyl;

heterocyclyl is 1*H*-indolyl, 1*H*-pyrrolyl, 2,3-dihydro-benzo[1,4]dioxinyl, 9*H*-carbazolyl, benzo[1,3]dioxolyl, furyl, pyrazolyl, thienyl, 4-oxo-benzopyranyl, azetidinyl, imidazo[2,1-b]thiazolyl, pyridyl, imidazolyl, 2,3-dihydro-benzofuryl, or benzo[b]thienyl; halogen is fluoro, chloro, bromo, or iodo; or a salt thereof.

13. A compound according to claim 12 of Formua I selected from the group consisting of

WO 03/028641

; or, in case of, a salt thereof.

14. A compound according to claim 1, wherein Q is Fomura II; R_1 represents

- (i) C₁-C₁₆ alkyl,
- C₁-C₁₆ alkyl substituted by substituent(s) independently selected from
- ·halogen,
- ·carbocyclyl,
- ·carbocyclic aryl,
- •carbocyclic aryl substituted by substituent(s) independently selected from
- ••halogen,
- ••nitro,
- ••C₁-C₃ alkyl,
- ••halogenated C₁-C₃ alkyl,
- ••C₁-C₃ alkoxy,
- ••halogenated C₁-C₃ alkoxy,
- (ii) C2-C3 alkenyl,
- C₂-C₃ alkenyl substituted by carbocyclic aryl,
- (iii) carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from
- •halogen,
- •cyano,
- •nitro,
- •C₁-C₅ alkyl,
- •C₁-C₅ alkyl substituted by substituent(s) independently selected from
- ••halogen,
- ••oxo,
- •C₂-C₃ alkenyl,
- •C₁-C₄ alkoxy,
- •C₁-C₄ alkoxy substituted by substituent(s) independently selected from
- ••halogen,
- ••heterocyclyl,
- ••halogenated heterocyclyl,
- carbocyclic aryloxy,

•carbocyclic aryloxy substituted by substituent(s) independently selected from

- ••halogen,
- ••nitro,
- •heterocyclyloxy,
- •heterocyclyloxy substituted by substituent(s) independently selected from
- ••halogen,
- ••C₁-C₃ alkyl,
- ••halogenated C₁-C₃ alkyl,
- •C₁-C₃ alkoxycarbonyl,
- •mono- or di-C₁-C₄ alkylamino,
- •C₁-C₃ alkylcarbonylamino,
- •carbocyclic aryl diazo,
- •carbocyclic aryl diazo substituted by mono- or di- C1-C3 alkylamino,
- •C₁-C₃ alkylsulfonyl,
- ·carbocyclic aryl,
- (iv) heterocyclyl,
- or heterocyclyl substituted by substituent(s) independently selected from
- halogen,
- •C₁-C₃ alkyl,
- •C₁-C₃ alkyl substituted by substituent(s) independently selected from
- ••halogen,
- ••oxo,
- ··carbocyclic arylcarbonylamino,
- halogenated carbocyclic arylcarbonylamino,
- ••heterocyclyl,
- ••heterocyclyl substituted by substituent(s) independently selected from
- •••halogen,
- ••• C_1 - C_3 alkyl,
- •••halogenated C₁-C₃ alkyl,
- $\cdot C_1 C_3$ alkoxy,
- •C₁-C₃ alkylcarbonylamino,
- ·carbocyclic arylsulfonyl,

```
•C<sub>1</sub>-C<sub>3</sub> alkoxycarbonyl,
·carbocyclic aryl,
·halogenated carbocyclic aryl,
•heterocyclyl,
•heterocyclyl substituted by substituent(s) independently selected from
••halogen,
••C<sub>1</sub>-C<sub>3</sub> alkyl,
••halogenated C<sub>1</sub>-C<sub>3</sub> alkyl;
        Y is -S(O)_2-;
        wherein carbocyclic aryl is phenyl, biphenyl, or naphthyl;
        carbocyclyl is 7,7-dimethyl-2-oxo-bicyclo[2,2,1]heptyl;
        heterocyclyl is 1,2,3,4-tetrahydro-isoquinolyl, 1,2,3-thiadiazolyl, 1H-pyrrolyl,
benzo[2,1,3]oxadiazolyl, benzo[b]thienyl, furyl, imidazolyl, isoxazolyl, pyrazolyl, pyridyl,
quinolyl, thiazolyl, or thienyl;
        halogen is fluoro, chloro, bromo, or iodo;
        or a salt thereof.
```

15. A compound according to claim 14 of Formua I selected from the group consisting of

; or, in case of, a salt thereof.

16. A compound according to claim 1, wherein Q is Fomura II;

R₁ is selected from H, -CO₂'Bu, or -CO₂Bn (Bn is a benzyl group);

R₂ is methylamino or dimethylamino;

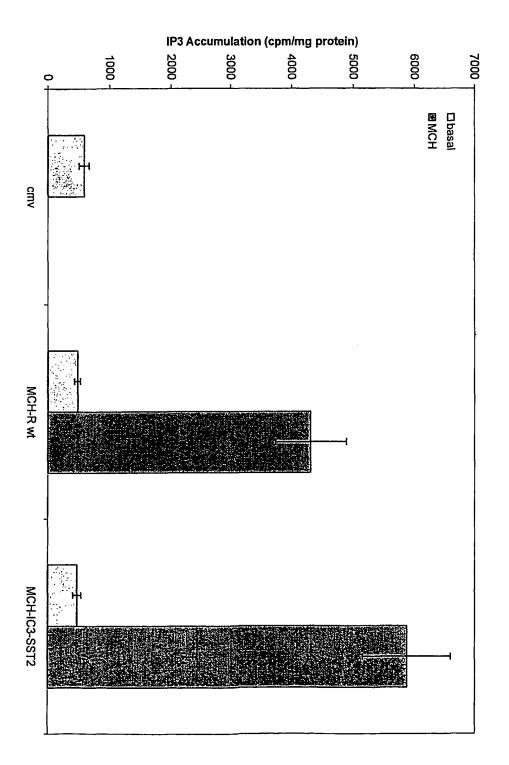
L is selected from Formula XX - XXII;

Y is a single bond;

or a salt thereof.

- 17. A method for modulating the G-protein receptor, SLC-1, comprising the step of contacting said SLC-1 with a MCH receptor antagonist.
- 18. A method for modulating the G-protein receptor, SLC-1, comprising the step of contacting said SLC-1 with a compound of claims 1-16.
- 19. The method of prophylaxis or treatment of obesity, obesity related disorders, anxiety, or depression in mammals in need of such treatment comprising administering to the mammal a therapeutically effective amount of a compound having the composition of any of claims 1-16.
- 20. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound having the composition of any of claims 1-16.

Fig. 1



IP3 Assay 293 Cells

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Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val 180 185 190

Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe 195 200 205

Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala 230 235 Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg 250 Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr 275 280 Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys 310 Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly Thr Ser Arg Met Gly Cys Thr Leu Ser Ala Glu Asp Lys Ala Ala Val Glu Arg Ser Lys Met Ile Asp Arg Asn Leu Arg Glu Asp Gly Glu Lys Ala Ala Arg Glu Val Lys Leu Leu Leu Gly Ala Gly Glu Ser Gly 390 Lys Ser Thr Ile Val Lys Gln Met Lys Ile Ile His Glu Ala Gly Tyr 410 Ser Glu Glu Glu Cys Lys Gln Tyr Lys Ala Val Val Tyr Ser Asn Thr Ile Gln Ser Ile Ile Ala Ile Ile Arg Ala Met Gly Arg Leu Lys Ile Asp Phe Gly Asp Ala Ala Arg Ala Asp Asp Ala Arg Gln Leu Phe Val 455 Leu Ala Gly Ala Ala Glu Glu Gly Phe Met Thr Ala Glu Leu Ala Gly Val Ile Lys Arg Leu Trp Lys Asp Ser Gly Val Gln Ala Cys Phe Asn Arg Ser Arg Glu Tyr Gln Leu Asn Asp Ser Ala Ala Tyr Tyr Leu Asn 505

Asp Leu Asp Arg Ile Ala Gln Pro Asn Tyr Ile Pro Thr Gln Gln Asp 515 520 525

Val Leu Arg Thr Arg Val Lys Thr Thr Gly Ile Val Glu Thr His Phe

Val Leu Arg Thr Arg Val Lys Thr Thr Gly Ile Val Glu Thr His Phe 530 535 540

Thr Phe Lys Asp Leu His Phe Lys Met Phe Asp Val Gly Gln Arg 545 550 555 560

Ser Glu Arg Lys Lys Trp Ile His Cys Phe Glu Gly Val Thr Ala Ile 565 570 575

Ile Phe Cys Val Ala Leu Ser Asp Tyr Asp Leu Val Leu Ala Glu Asp 580 585 590

Glu Glu Met Asn Arg Met His Glu Ser Met Lys Leu Phe Asp Ser Ile 595 600 605

Cys Asn Asn Lys Trp Phe Thr Asp Thr Ser Ile Ile Leu Phe Leu Asn 610 615 620

Lys Lys Asp Leu Phe Glu Glu Lys Ile Lys Lys Ser Pro Leu Thr Ile 625 630 635 640

Cys Tyr Pro Glu Tyr Ala Gly Ser Asn Thr Tyr Glu Glu Ala Ala Ala 645 650 655

Tyr Ile Gln Cys Gln Phe Glu Asp Leu Asn Lys Arg Lys Asp Thr Lys
660 665 670

Glu Ile Tyr Thr His Phe Thr Cys Ala Thr Asp Thr Lys Asn Val Gln 675 680 685

Phe Val Phe Asp Ala Val Thr Asp Val Ile Ile Lys Asn Asn Leu Lys 690 695 700

Asp Cys Gly Leu Phe